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UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

R INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING

VOLUME 15, NUMBER 1, FALL 1979

THE INTERNATIONAL JOURNAL OF ACCOUNTING

EDUCATION AND RESEARCH

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING OF THE COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

The Center for International Education and Research in Accounting was established to foster the international development of education and research in the accounting discipline, to provide a base for the international exchange of ideas and materials relating to accounting education, to encourage and assist both accounting faculty personnel and students from other countries to come to the University of Illinois at Urbana-Champaign for study and research in accounting, and to provide faculty members for assignment to universities in other countries.

The center, functionally and administratively, is a constituent part of the Department of Accountancy and the College of Commerce and Business Administration of the University of Illinois at Urbana-Champaign. The graduate training of a substantial number of international students has been an important activity of the department for many years.

One of the specific goals of the center is the publication of reports, booklets, and monographs which further the cause of advanced education and research in accounting.

V. K. Zimmerman, *Director*

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Volume 15 · Number 1 · Fall 1979

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The International Journal of Accounting *Education and Research* is published semiannually, spring and fall, by the Center for International Education and Research in Accounting, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign. Subscription rates are $10.00 per year. Single-copy price is $5.00. Copies of prior issues are still available.

Manuscripts and communications for the editor and business correspondence should be addressed to **The International Journal of Accounting** *Education and Research,* 320 Commerce Building (West), University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

V. K. Zimmerman, *Editor*
JaNoel S. Lowe, *Assistant Editor*

Contents

A Note from the Editor

This issue of *The International Journal of Accounting Education and Research* contains papers delivered at an International Seminar on Accounting held at the University of Illinois at Urbana-Champaign on March 29-31, 1979. The theme of the seminar was "International Accounting: Professional Organizational Efforts and Current Reporting Problems."

We are particularly pleased to publish this collection of the papers presented at the seminar. The seminar topic remains, in our opinion, an important and contemporary one. The expanding importance of accounting internationally is manifested in many ways. The growth of multinational corporations and the political and economic stipulations of national states to the practice of accounting are but two of these influences. Quite clearly, the development of accounting organizations concerned with the effective operation of the accounting profession internationally is an important related factor.

The articles presented reported on international developments as of the time of the seminar. A number of the organizations mentioned have had new pronouncements. The reader should refer to the most recent publications of the international accounting associations mentioned to determine the most recent developments. The significant international changes that relate importantly to the accounting profession are clear from a reading of the manuscripts. We believe the pace of this development will increase.

In addition to the papers presented at the seminar, three additional manuscripts commenting on other international aspects of accounting are included in this issue.

V. K. Zimmerman
Urbana, Illinois

St. Louis to Munich: The Odyssey of the International Congresses of Accountants

GERHARD G. MUELLER*

Odysseus (or Ulysses, as some translations have it) was of noble Greek lineage. He joined the high and mighty of his country to fight in the Trojan War. His return from that venture was more treacherous than the war itself; the poet speaks of blinding storms, mirages, siren songs, and hosts of false starts, dangers, and sunken ships. After a journey of more than ten years, he reached his home in Ithaca again. Tattered and emaciated as he was, no one recognized him except his loyal dog and a few old beggars on the street. Yet at his palace there was much action. Believing him to have perished some time before, countless suitors romanced his wife, Penelope. Still she had not given up hope and spent herself to near exhaustion defending his interests and maintaining his political rights. Not unexpectedly, the story has a positive ending. Odysseus is able to establish a new order in Ithaca and reensconce himself solidly as king of his domain.

Why appeal to Homer to set the scene for the 1979 University of Illinois International Accounting Seminar? The parallels between the story of Odysseus and the internationalization of professional accounting are many.

The international heritage of accounting is a well recognized fact.[1]

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[1] Robert H. Parker, "Some International Aspects of Accounting," *Journal of Business Finance* (Winter 1971): 29-39.

After its procedural beginnings in the Italian city states during the thirteenth and fourteenth centuries, the "art of double-entry bookkeeping" migrated north to Austria and Germany and from there to France and Holland. Soon the Hanseatic city states had financial reporting systems superior to those of their Italian peers. And the French, of course, adapted the system to governmental record keeping and accounting. In all, an international success story had begun.

Accounting's Trojan War, however, did not occur until the mid-nineteenth century, when professionalization began. Up to that point, accounting was strictly vocational in nature. Then the Scots saw opportunities for financial auditing undertaken by accounting professionals. Soon other parts of the English-speaking world followed suit, and the accounting odyssey of international professionalism had its start. At the International Congress of Accountants in Munich in 1977, it came to a good end. At that point, the International Federation of Accountants (IFAC) was formally created. It marked widespread recognition of the fact that professional accounting is, indeed, international in scope and application. The end of the odyssey, however, is not the subject of this paper. Our purpose here is to sketch the odyssey and summarize a few of the effects it has produced.

THE INTERNATIONAL CONGRESSES OF ACCOUNTANTS

Probably the most significant benchmark in the development of international professionalism for accounting is the dogged adherence to providing an international forum for the exchange of thoughts and experiences. This forum took shape as the International Congresses of Accountants. They began in St. Louis in 1904 and at present are regularly scheduled events taking place five years apart. Organization and conduct of these congresses have withstood global wars and heights of economic boom and depression. Cultural, legal, political, and social inroads have not been able to sideline the International Congresses of Accountants. So we do have something in common with our Greek friend, Odysseus!

The Munich Congress in 1977 was the eleventh in the series. Proceedings were published for each Congress, and it is a most illuminating exercise to read through these eleven books. To set the scene somewhat, let us briefly review some of the concerns of the time by looking at the official records of four such gatherings.

St. Louis, 1904

Conducted during a world's fair, this first Congress was international in nature but did not have "international" in its title. It was held under

the auspices of the "Federation of Societies of Public Accountants in the United States of America." Participants included such illustrious professional personalities as Arthur Lowes Dickinson, William M. Lybrand, George O. May, and R. H. Montgomery. The Society of Accountants and Auditors in London sent an official delegate, as did the society's Scottish branch in Edinburgh. The Society of Incorporated Accountants and Auditors in Ireland sent its delegate with a formal resolution expressing its interest in the "professional welfare of all Irish-American accountants."

Key topics of the Congress included one or more papers under each of the following general headings:

1. Municipal Accounting;
2. The CPA Movement and the Future of the Profession of the Public Accountant in the United States;
3. Audit Companies;
4. Duties of Professional Accountants in Connection with Invested Capital Both Prior to and Subsequent to the Investment;
5. The Importance of Uniform Practice in Determining the Profits of Public Service Corporations Where Municipalities Have the Power to Regulate Rates;
6. The British Societies;
7. The Canadian Societies;
8. The Profits of a Corporation; and
9. Public Accountants in Holland.

New York, 1929

Twenty-five years later, the Congress had become truly international in every respect. The list of "foreign participating societies represented at the Congress" included the following countries: Austria, Canada, Central America, Czechoslovakia, England, Germany, Ireland, Italy, Japan, Mexico, Norway, Puerto Rico, Rumania, Russia, Scotland, and Switzerland. Colonel Robert H. Montgomery was president of this Third International Congress of Accountants, with Professor Giles L. Courtney of New York University's School of Commerce serving as executive secretary. Prizes were awarded for papers, with the first prize in the amount of $500 going to Perry Mason.

Session topics on which several papers were prepared included the following:

1. Development of Professional Accounting in Europe;
2. Legislation Affecting Accounting in Private Industry for Tax Purposes or in Mergers or Cartels;

3. Educational Activity in Accounting and Statistical Work;
4. Problems of Depreciation and Obsolescence;
5. Principles of Valuation;
6. Consolidated Financial Statements;
7. External Influences Affecting Accounting Practice;
8. Cost Accounting;
9. Municipal and Governmental Budgets; and
10. The Thirteen-Month — Year Calendar Reform.

Amsterdam, 1957

The president of this five-day meeting was Mr. "International Accounting Practice" himself, the late Jacob Kraayenhof. Sizable delegations at this congress came from Australia, Austria, Belgium, Brazil, Burma, Canada, Ceylon, Denmark, East Africa, Finland, France, Ghana, Germany, Great Britain and Ireland, India, Israel, Italy, Japan, Luxembourg, Malta, Mexico, Monaco, New Zealand, Norway, Pakistan, the Philippines, Rhodesia, South Africa, Spain, Sweden, Switzerland, Thailand, Trinidad and Tobago, Turkey, the United States of America, and Venezuela.

The professional sessions were organized under the following six general themes:

1. Principles for the Accountant's Profession;
2. Budgeting and the Corresponding Modernization of Accounting;
3. The Verification of the Existence of Assets;
4. Business Organization and the Public Accountant;
5. The Internal Auditor; and
6. Ascertainment of Profit in Business.

Munich, 1977

The size and involvement of the latest International Congress of Accountants literally "flooded" the entire city of Munich.[2] The plenary sessions, with their thousands of participants, had to be held at the Olympic Hall erected as part of the complex serving the prior Summer Olympic Games. Every city hotel was sold out, and even private dinner reservations were difficult to come by. Congress registration badges yielded free rides on municipal streetcars and buses and prompted consternation everywhere that "there are this many accountants around."

The topics of the three major plenary meetings were these:

[2] Of the 6,323 people officially registered for the Munich conclave, 3,758 were Congress members and 2,565 were accompanying persons.

1. Efforts toward Harmonization of Financial Reporting and Auditing over the Last Five Years;
2. Essential Information in Published Annual Financial Statements; and
3. Orientation of Financial Accounting, Planning, and Consulting for Purposes of Enterprise Management.

Papers on technical subjects were organized around the following themes:

1. Inflation Accounting;
2. Accounting for Research and Development Costs;
3. Accounting for Income Taxes;
4. The Accountant as Consultant — Possibilities and Limits;
5. Accounting for Intercorporate Investments (including the Equity Method); and
6. Preparation, Exposure, Contents, and Acceptance of International Accounting Standards Issued by IASC.

Survival Factors

If the International Congresses of Accountants were indeed the key ingredient to the international "leavening" of our profession, it seems important to judge what factors contributed most importantly to the survival of these meetings. I render this judgment on the basis of close scrutiny of the proceedings of the eleven International Congresses and of personal attendance at the last four of them.

As with most social institutions, people and their respective leadership abilities tend to "make or break them," so to speak. The two very remarkable "people" aspects of the International Congresses are that (1) each Congress drew into attendance many of the recognized professional leaders of the day, and (2) the same names appear time and again among attendee lists for three to five successive Congresses.

Since World War II, many international CPA firms and associations have held partners or policy committee meetings in conjunction with the Congresses. This practice provided a certain subsidy on Congress attendance and insured that senior executives from the professional ranks became actively involved in the planning of Congress and the later conduct of technical and organizational meetings. So the recognized leaders of the profession have consistently had a major involvement in International Congress affairs.

A second important element was surely the fact that Congress participants never took their professional and business concerns too seri-

ously. The president of the 1904 meeting, J. E. Sterrett, commented in his opening remarks:

> While the program contains much that is of a serious and sometimes technical character, the committee has not forgotten that man is a social animal. The reception this evening, at which the Mayor of St. Louis has very kindly consented to be present, and the banquet tomorrow evening, both of which occasions are to be graced by the presence of the ladies, will afford opportunities for us to become better acquainted and to forget for a little time "the cares that infest the day."

For the same meeting, the official record shows that after a luncheon enjoyed by all present, "the members of the Congress hurried back to the hall," and, at the hall, the Congress was called back to order at 3:30 p.m. There must have been some socializing as admonished by President Sterrett!

The setting was not much different in 1929. Colonel Robert H. Montgomery, president of that Congress, stated during its opening session:

> This Congress is a grand free-for-all, checking-up party. We are proud only of what we accomplish when we can prove it to be good. . . . The discussions must be critical, pertinent and constructive, or we will be bored. We ask to be entertained or instructed. A word to the wise is sufficient!

It seems therefore that a low-key approach to these Congresses has helped them to survive. Their seemingly semi-social nature was clearly appealing to organizers and attendees alike. Cultural and artistic events always were scheduled portions of Congress activities. There have always been formal receptions, banquets, and/or dinner dances. Highly placed political or civic personalities of the host countries have always addressed assembled Congress members. Quite apparently, the "all work and no play . . ." adage applies to accountants as much as to everyone else.

A third characteristic, with sensitivity to Congress successes, appears to be the continuous ability of Congress program planners to evolve overall programs in tune with the moods and needs of the times. The birth pangs of the national professions and their respective organizations were much in evidence in 1904. Technical adolescence was evident in the 1929 program: valuation principles, cost accounting procedures, consolidated financial statements, and budgetary processes. Internal controls and accounting for effects of inflation were the key program topics in 1957, and objectives of financial statements plus the international accounting standards issue dominated the 1977 gathering.

In retrospect, the "mirror of the times" approach to Congress pro-

grams apparently served everyone well. Some excellent papers are in evidence for each of the eleven venues. There can be little doubt that each participant was able to derive some benefit from the technical programs and "take home" some points and pointers useful for subsequent professional practice. One gets the impression that there were few, if any, persons who ever regretted attending one of the International Congresses of Accountants.

A fourth Congress dimension of note seems to reflect a certain entrepreneurial spirit among professional accountants in different countries. Time and again one finds references in papers, opening or closing addresses, and toasts presented at various occasions recognizing satisfaction in having learned what others are doing. Sharing of professional (including business development) experiences has, of course, two dimensions — willingness to share one's successes with others and the reciprocal interest in what others are doing and how they are accomplishing it. Both of these aspects surface time and again in Congress proceedings. Accountants on these programs took pride, by and large, in relating individual or firm accomplishments. Equally important, their audiences appeared eager to listen and interested in learning. Thus, a certain spirit of professional enterprise endowed successive International Congresses of Accountants with take-home benefits for the attendees. These benefits, as pointed out in the various proceedings, accrued not only from technical sessions. Over and over again, they were achieved through informal interchanges that are the natural by-product of large-scale, relatively loosely structured international convention meetings.

Finally, one comes away from reading the books of proceedings with an impression of an indomitable spirit of idealism unleashed through these professional gatherings. Literally from the beginning, the professional accountants involved in these meetings reached for higher goals, better professional structures, and the best possible service to clients. Attention to international harmonization (in later years standardization) established itself from the beginning as a central purpose of these Congresses. And this idealism simply refused to die, even though it was subverted time and again by waves of political nationalism and overdoses of professional provincialism. Mr. Jacob Kraayenhof, president of the 1957 Amsterdam International Congress of Accountants, took the message of international standards to the 1959 annual meeting of the American Institute of CPAs by appealing to the goodwill and professional strength of the American members of the profession to foster the cause of international standards. It took another fourteen years

(until 1973) for the International Accounting Standards Committee to open its portals, and another four years (until 1977) for the international odyssey to end in the formation of IFAC. Decades had already passed since the international standards movement had been launched in earnest! One must, therefore, acknowledge a characteristic of idealism and commitment to purpose as anchors in the International Congress of Accountants movement.

LEVERAGE EFFECTS

Not surprisingly, the consistent growth and visibility of successive International Congresses of Accountants spawned (1) a number of parallel international accounting meetings and conferences, and (2) a nucleus of international accounting panels and agencies. On the former, the influence was rather direct — on the latter, more indirect.

The idea of separate international accounting conferences for the Western Hemisphere gained support quickly after World War II — in fact, before the International Congresses of Accountants sequence was revitalized for the post-World War II period with the Sixth International Congress of Accountants held in London in 1952. The Western Hemisphere group organized itself as the Interamerican Accounting Conference and held its first hemisphere meeting in San Juan, Puerto Rico, in 1949. In 1975 the Interamerican Accounting Conference changed its name to Interamerican Accounting Association (IAA) to signal activities beyond periodic conferences. At present, IAA Secretariat headquarters are located in Mexico City at the premises of the Mexican Institute of Contadores Pùblicos. Among many other responsibilities, the Secretariat is instrumental in translating a large volume of English-language technical accounting literature into the Spanish language. It also publishes a quarterly newsletter for the entire Western Hemisphere profession. The Thirteenth Conference of the Interamerican Accounting Association took place September 16-20, 1979, in Panama City.

Also prior to the resumption of the International Congresses of Accountants in London in 1952, twelve professional associations of independent accountants from Austria, Belgium, France, West Germany, Italy, Luxembourg, the Netherlands, Portugal, Spain, and Switzerland founded the European Accountants Association (Union Européenne des Experts Comptables, Economiques et Financiers — UEC) in November 1951 in Paris. The first formal Congress of this continental European group occurred in 1953 with partial sessions in

Florence and Rome, Italy. The Eighth UEC Congress was held in 1978 in Dublin, Ireland.

UEC sponsors very technical accounting seminars (called Euro-seminars), conducts study conferences, and supports an extensive publications program, including an accounting dictionary, an auditing handbook, and a quarterly trilingual accounting journal. Standing committees of UEC are active and have established themselves as a strong international accounting force. Not surprisingly, UEC must cope with politization of internal problems — notably its relationships with EEC accounting policy and advisory groups.

Not to be outdone, the profession in the Asian and Pacific countries held its first Far East Conference of Accountants in Manila in 1957. The underlying organization structure was named the Asian and Pacific Accounting Convention which, in the early 1970s, changed its name to Confederation of Asian and Pacific Accountants (CAPA). The ninth CAPA Conference occurred October 14-20, 1979, in Manila, the Philippines.

CAPA activities are modest relative to the other international groupings. The Secretariat was established in 1976 in New Zealand and moved to Hong Kong in 1978. An occasional newsletter is published, and technical committees work and report intermittently. But CAPA is clearly establishing itself as the professional accounting focal point around the Pacific rim countries.

The latecomers among the international accounting congress/conference groups are the academics. Educators and researchers in accounting organized their first international meeting at the University of Illinois at Urbana-Champaign in the United States in 1962 in conjunction with (that is, immediately prior to) the 1962 Eighth International Congress of Accountants held in New York. To date, no permanent secretariat or organization exists in support of the International Conferences on Accounting Education. The only technical outputs from these meetings are the published proceedings of the four venues so far. A fifth conference is planned parallel with the 1982 Mexico City International Congress of Accountants.

Next we turn to the more indirect effects produced by the International Congresses of Accountants toward greater internationalization of the professional scene from country to country. These effects are summarized very aptly in a book on the subject by the Canadian Institute of Chartered Accountants published late in 1979.

The most significant consequence issuing indirectly from the se-

quence of international congresses is the establishment of the International Accounting Standards Committee in 1973 and the creation of the International Federation of Accountants in 1977. These two events and their subsequent further developments are discussed in other papers contained in the present volume.

Of lesser but still far-reaching importance is the establishment of regional accounting policy groups such as the Groupe Etude as the accounting advisory arm to the Commission of the European Economic Community (EEC). The accounting-related directives of the EEC Commission are by now a well-publicized issue of multinational accounting. A similar accounting advisory group is at work on behalf of the ASEAN countries in the Pacific.

In special recognition of the accounting development needs of the Third World, the United Nations also created and implemented an international accounting standards Group of Experts who function as an adjunct to the UN Centre on Transnational Corporations.

The OECD Treaty Nations have likewise established their own Board of Experts on International Accounting Standards. One should be reminded that there is a fair amount of jockeying for political position among all of the groups currently making recommendations for international accounting standards.

Finally, brief mention of a few other committees and agencies concerned with multinational accounting matters is in order. One such group is the Accountants International Study Group which conducted comparative accounting practices studies between Canada, the United Kingdom, and the United States and published research reports on various topics between 1968 and 1978. In all, this group issued twenty-one reports. It was dissolved when the IFAC came into being.

Working with a similarly restricted scope is the International Committee for Accounting Cooperation whose aim is to give professional accounting assistance to development efforts in Third World countries. This group undertook its first major study project in 1967 in Columbia, South America, and has worked on several smaller projects since that time. Representatives of this committee are regular attendees at most international accounting congresses and conferences.

Academic accounting research centers have been established at the University of Illinois at Urbana-Champaign, at the University of Washington in Seattle, and at the University of Lancaster in the United Kingdom. These centers devote various amounts of resources to the study of multinational accounting problems and publish monographs and reports. The University of Illinois also hosts an annual

seminar on international accounting and publishes the semi-annual *International Journal of Accounting Education and Research.*

RESULTS AND CONSEQUENCES TO DATE

Tests of association are always precarious — even when based on statistical methodologies. Nevertheless, a few judgments seem in order as reference points on the observable impact of the International Congresses of Accountants.

Wide Proliferation of the Anglo-American Financial Accounting Model

Even though the International Congresses of Accountants have a truly international tradition, they clearly have become prime carriers of the Anglo-American conventional accounting model. During the last thirty years, this model has become an international standard unto itself. Denmark, Germany, Japan, Korea, Mexico, and Sweden, to name but a few examples, have all recently changed course in the direction of Anglo-American accounting standards and practices. The initial work of the International Accounting Standards Committee appears to have charted the same path. There seems little doubt that the Anglo-American type of financial accounting is much more widespread in 1979 than it was only a decade or two ago.

Better Accounting Alignments with Actual Multinational Business Practices

By getting a head start on its own internationalization, accounting was reasonably well prepared for the professional service demand onslaught brought about by the unprecedented growth of multinational business activity during the 1950s and 1960s. Accounting development is generally thought of as lagging behind economic, legal, and social developments. The International Congresses of Accountants have not changed this lagging effect, but they appear to have fostered a sense of preparedness for the era of the multinational enterprise. The degree of congruence between accounting service capabilities and multinational business demands for accounting services was certainly improved by the facilitating effects of international professional meetings.

Balancing of International, Regional, and National Interests

Even though accounting has a long and illustrious international heritage, it turned protectively nationalistic toward the end of the 19th century. For all kinds of environmental (that is, nontechnical accounting) reasons, professional standards and practices divided themselves along strictly political boundaries. In turn, this produced protectionism

and much politicization. In the writer's judgment, the International Congresses did much to restore "balance" among interest groups, both national and transnational.

Provision of a Number of Ancillary Benefits

Many sophisticated observers feel that international financial capital markets are more efficient (both operationally and allocationally) due to the international "language" capabilities of accounting. Eurobond and Euromoney markets are regarded as prime support examples for this assertion.

With international peer pressures working, the general quality of financial reporting and disclosures appears to have improved steadily in the last few years. Professor M. Edgar Barrett of Southern Methodist University has found, as have other researchers, that financial disclosure quality in non-English-speaking countries has improved greatly in relation to financial disclosures prevailing in English-speaking countries. A certain convergence seems to be at work here. Without the nurture of international understanding and communication, the financial disclosure "gap" may still be widening instead of closing worldwide.

There is also the matter of the research laboratory aspect. By using the international accounting scene as a laboratory, researchers were able to test current cost accounting measurement effects in the Netherlands before transplanting them elsewhere. The efficiency of public securities markets was found to be weaker outside than inside the United States. The economic costs of accounting regulation were found to be significantly different from one country to another, even though the respective benefits appear to be more or less the same. There are a great many other instances in which international data access and comparative analysis have led to more reliable accounting research results.

As we asserted at the start of this paper, the odyssey of the International Congresses of Accountants seems to have followed closely the classical Homeric script. Of course, there is no Ithaca in accounting, and there is no kingdom to be secured from interlopers. But there is a purpose and a growing burden of responsibility. Let me close by expressing the hope that strong continuing commitment to our international challenges will help us to meet new professional obligations coming our way.

The International Federation of Accountants: Its Organization and Goals

MICHAEL N. CHETKOVICH*

INTRODUCTION AND BACKGROUND

If I recall correctly, my last participation in this conference was in the spring of 1973. At that time, the accounting profession was debating the merits of the report of the Wheat Committee, which recommended the establishment of the Financial Accounting Standards Board (FASB). It was only a few days later, as I recall, that the Council of the American Institute of Certified Public Accountants (AICPA), at its spring meeting, voted to accept the report and to support the establishment of the FASB.

It hardly seems possible that the FASB has been in existence for only six years. So much has happened in accounting since that time that it makes the FASB seem much older. Not the least of the developments has been in the international field, and it is of these developments that we speak today.

Gerhard Mueller has told you of the history of the International Congresses of Accountants and of the development of certain international accounting organizations up to the time of the Congress in Sydney in October of 1972. At each of these congresses, there was recognition of the need for better communications and closer cooperation among accountants on a worldwide basis and for greater harmonization of accounting standards. Certainly, this was a common message of closing speakers who exhorted their listeners to take some positive action toward achievement of these objectives.

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EVENTS AT SYDNEY — IASC AND ICCAP

Until Sydney, little was done. At Sydney, however, two giant steps which led to the formation of the International Accounting Standards Committee (IASC) and the International Federation of Accountants (IFAC) were taken. My mission here today is to talk about IFAC, but I must include some mention, if only a few words, of the establishment of IASC, for, in my opinion, this was one of the more important accounting developments of our times.

At Sydney, representatives of the countries involved in the work of the Accountants International Study Group (Canada, the United Kingdom, and the United States) met to explore what could be done to develop this effort in terms of establishing some form of international accounting standards-setting body. Amazingly, for the pace of international cooperation and progress tends to be agonizingly slow, IASC was in existence and ready for business as a nine-country body by June 1973. This was truly a remarkable achievement.

Once formed, it wasted no time proceeding with its task. Since its inception, it has issued approximately ten pronouncements on a variety of subjects and has a number of others in varying stages of development. Further, the base of participation has been broadened very considerably.

IFAC took a little more doing and considerably more time. Although the initial step was taken at Sydney, the Federation did not come into being until the Congress in Munich in October of 1977. Before considering why it took so long, let us first look at what happened in Sydney.

There, the International Working Party, which was appointed at the Paris Congress in 1967 to plan for the Congress in Sydney in 1972 and to present whatever other recommendations it might see fit with respect to other international activities, submitted its final report. In this report, the Working Party recommended the formation of an International Coordination Committee for the Accountancy Profession (ICCAP) whose duties would include:

1. Selection of the site for the next Congress and guidance and assistance to the host country, as appropriate;
2. Continuing liaison with all participating bodies;
3. Review of progress in the development of regional organizations and in assistance provided by bodies in more developed countries and the exchange of information between participating bodies;

4. Recommendation of changes for widening or amending the work of ICCAP — as may appear expedient; and
5. Keeping under review the need for an international secretariat.

WORK OF ICCAP

The first meeting of ICCAP was held in Dusseldorf, Federal Republic of Germany, in April 1973. There the original membership of nine countries was expanded to eleven, at which number it remained until the end.

Over the next four years, meetings were held generally on a twice-a-year basis, throughout the world. Various subcommittees which met at appropriate intervals and reported their findings and recommendations to the parent body were established. While ICCAP gave due attention to the entirety of its charge, its major efforts were devoted to and culminated in the establishment of IFAC, which came to pass some four and one-half years after the first meeting.

One might well ask why it took so long, particularly in view of the fact that IASC was activated in a matter of a half a year or so. In fairness, it should be recognized that the general plan for IFAC was completed by the fall of 1976, at which time it was exposed for comment to all bodies (some ninety-nine) who would be eligible for charter membership, as an Interim Report of ICCAP. Based on comments received and further consideration of some of the issues, a final report setting forth the specific plan for IFAC was issued in the spring of 1977. Nonetheless, it did take a considerable period of time and it is worth a few moments to explore the reasons for this.

DIFFICULTIES ENCOUNTERED

To begin, it must be recognized that an international effort, by its very nature, is apt to take considerably longer than a similar project done within national boundaries. There are the inevitable problems posed by distance, language, and varying national biases and interests. In this instance, the effort involved representatives of eleven nations from throughout the world. While all of these representatives were both able and dedicated individuals, understanding and agreement could not and did not come overnight.

Further, it was very much a part-time effort on the part of all concerned. There were no more than eight meetings of the Committee prior to Munich, generally of two days each. And while the establish-

ment of an international organization soon became the primary objective, it was by no means, as indicated earlier, the only task.

Added to these underlying difficulties were other factors which tended to prolong the effort:

1. Initially, there was not a strong concensus as to the need for an international organization;
2. There was concern for the possible negative effects such an organization might have on existing regional bodies;
3. There was concern over money; the various national accounting bodies were having their own budgetary problems;
4. There was a wide range of views as to the structure, duties, and responsibilities of such an organization; and
5. There was concern over its impact on and relationship with IASC.

STRENGTHS OF ICCAP

Perhaps a more relevant question, given all of these difficulties and cricumstances, is how it did come to pass. A number of factors which contributed to the ultimate success of the mission are worthy of mention:

1. The Committee was blessed with superb leadership. The chairman, Reinhard Goerdeler of the Federal Republic of Germany, proved to be an ideal choice. He was able, understanding, and fair, and soon came to enjoy the respect and affection of his associates.
2. Staff support was excellent. Each Committee member was accompanied and supported by one or more senior staff from his national body. These individuals, such as Willi Dietrich of the German Institute, John Hough and Philip Carrell of the English Institute, and Wallace Olson and Robert Sempier of the AICPA, to mention just a few and only as examples, were invaluable in providing both advice and assistance. Without them, the task would not have been accomplished.
3. There was a considerable continuity of membership, and there soon developed an atmosphere of mutual confidence and respect. More than half the members served for the full life of ICCAP and several are continuing as members of the Council of IFAC.
4. As time passed, there was a growing recognition of the need for some form of international organization and of the urgency of moving forward with its establishment.

ESTABLISHMENT OF IFAC

In any event, the Committee devised a plan of organization, a constitution, for a broadly based international organization. In October 1977, this constitution was signed by official representatives of fifty accountancy bodies from forty countries. Since that time, membership has grown to seventy-two bodies from forty-five countries, representing an aggregate membership of 700,000 accountants.

As the name implies, IFAC is a federation of accountancy organizations. Some ninety-nine such organizations were determined by ICCAP to be eligible to become founder members, these being bodies which had been eligible for official participation in the International Congress, as listed in Appendix B of the constitution. Thereafter, membership was to be by application and approval of the Council as provided in the constitution.

The broad objective of IFAC, as set forth in its constitution, is the development and enhancement of a coordinated worldwide accountancy profession with harmonized standards. To work toward this objective, it is provided that IFAC shall (1) initiate, coordinate, and guide efforts that have as their goal the achievement of international technical, ethical, and educational guidelines for the accountancy profession and reciprocal recognition of qualifications for practice, working through committees and in cooperation with regional organizations; (2) encourage and promote the development of regional organizations; and (3) arrange for the holding of international congresses.

STRUCTURE OF IFAC

IFAC is an association formed under the Swiss Civil Code and, accordingly, its registered office is designated as Geneva. However, its administrative office is in New York City. The senior governing body of IFAC is its Assembly which is composed of one representative from each of the member organizations. According to the constitution, the principal powers and duties of the Assembly include (1) election of the members of the Council; (2) decisions, upon the recommendation of the Council, as to the timing, location, and host body(ies) of each International Congress of Accountants; (3) the financial contributions to be paid by member bodies; (4) determination of member bodies to be expelled in accordance with provisions of the constitution; and (5) amendments to the constitution.

It is provided that the Assembly shall hold a regular ("ordinary") meeting during or immediately prior to each International Congress and that special meetings may be called in accordance with specified procedures.

It is obvious that, because of its size and the infrequency of its meetings, the Assembly is not the agency to manage the affairs of the Federation. Rather, this is the function of the Council which consists of fifteen representatives of member bodies from fifteen countries who are elected at ordinary meetings of the Assembly and serve until the next ordinary meeting, which normally would be a period of five years.

The constitution delegates to the Council a wide range of duties and responsibilities and in addition provides that it shall "take any action which is in the general interests of IFAC and which is not expressly denied to it by this constitution. . . ."

Meetings of the Council are to be held at such times and places as it may decide, providing that there be at least one meeting a year. In practice, the Council has been following a schedule of two meetings a year.

The constitution provides that the Council shall elect from among its members a president, a deputy president, and two vice presidents. The terms of the president and deputy president are fixed at two and one-half years, and each is limited to one term. The vice presidents serve for a term determined by the Council, which may not exceed five years.

FINANCES

The initial dues structure is set forth in an appendix to the constitution and is expected to remain unchanged at least until the meeting of the Assembly in connection with the International Congress in Mexico City in 1982. Dues are scaled according to the size of the member body's membership and range from a minimum of $200 to a maximum of $23,000. There is provision for reduced dues for member bodies from countries where the per capita income is less than $2,000 per annum.

The dues schedule was set so as to provide an estimated average annual revenue of $180,000 for the first five years of the Federation's existence. As a supplement to this dues revenue, the AICPA volunteered to absorb the Federation's occupancy and certain related costs. Thus, it can be seen that this fledgling organization operates on a very

modest budget. It has only three full-time employees: an executive director, an assistant, and a secretary.

RELATIONSHIP WITH IASC

When IASC and ICCAP were formed, it was provided that IASC would be "a part of" ICCAP but that it would be autonomous in its function of setting international accounting standards. Thus IASC had its own financing and staff, and ICCAP did not involve itself in the operations of IASC. However, there was a close liaison between the two organizations.

The constitution of IFAC recognizes IASC as the international accounting standards-setting body and provides that this past relationship shall be carried forward "on the same general basis" and that "it is recognized that the objectives of IASC and IFAC are interdependent and agreed that the closest relationship should be maintained between the two bodies."

While there is no reason to question that IASC will continue to be recognized and to function as the accounting standards-setting body, it is not unreasonable to expect that, at some future time, the two organizations will be brought closer together structurally. Certainly, the relationship between the two will be, and needs to be, a very close one.

RELATIONSHIP WITH REGIONAL ORGANIZATIONS

It is contemplated, and IFAC's constitution provides, that it will work closely with established regional accounting organizations of which there now are three, so that there will be no unnecessary duplication of cost and effort. To encourage and to promote such cooperation, it is provided that a representative of each of these organizations shall be entitled to attend all meetings of the Council and to have the privilege of the floor at such meetings.

IFAC WORK PROGRAM

At the initial meetings of the Assembly and of the Council in Munich, a twelve-point work program was accepted and seven committees were established. Robert Sempier will discuss what IFAC has been doing since its establishment at Munich and the work of these committees, so these topics will not be pursued here. Suffice it to say that there has been considerable activity, and the progress is encouraging.

SUMMARY AND CONCLUSION

It must be obvious that IFAC labors under some significant weaknesses and limitations. It begins life with all of the problems of a new international body, relying largely on volunteer effort and with little or no authority over anyone or anything. As has been noted, it has very limited resources in both funds and staff.

Yet IFAC also has some significant strengths. There is a strong sense of commitment on the part of the organizations and individuals who were instrumental in its establishment to make it work. It has exceptional leadership in the persons of its president, Reinhard Goerdeler, mentioned earlier, and its vice president, Gordon Cowperthwaite of Canada. And it has as its first executive director an individual who is well-known and highly respected among accountants throughout the world, Bob Sempier. It would be very difficult to conceive of anyone better fitted for this difficult assignment than Bob.

Thus, while IFAC is new and its future is subject to many uncertainties, it nonetheless must be recognized as a very significant development on the international scene and one that has considerable potential for contributing to the advancement of accounting internationally. Certainly it deserves our strongest support. With such support, I am confident that it will prove to be a strong and positive force in achieving greater international cooperation and harmonization in accounting.

The International Federation of Accountants: Operating Procedures and Current Progress

ROBERT N. SEMPIER*

The International Federation of Accountants (IFAC) is a new and exciting organization of great significance to the accounting profession worldwide. Those of us who were associated with the International Coordination Committee for the Accountancy Profession (ICCAP) and now with IFAC know that progress can be made on a planned basis in an international organization of this type. However, expectations must not be unduly high, since any organization representing seventy-two accountancy bodies from fifty-five countries must take time to settle and adjust in a variety of ways.

As a result, we have attempted to design a work program for IFAC that is both reasonable in terms of expected accomplishments and at the same time sufficiently aggressive to demonstate to our membership and other interested organizations that IFAC is moving steadily forward in fulfilling its objective — the development and enhancement of a coordinated world-wide accountancy profession with harmonized standards. In determining the work program for the first five years, we have also kept in mind that IFAC has a modest staff consisting of two and one-half professionals with secretarial support. As such, we must give considerable attention to our priorities and concentrate our efforts on those areas which are most likely to produce the best results.

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* Robert N. Sempier is the executive director of the International Federation of Accountants.

BASIC OBJECTIVES OF IFAC

The basic objectives of IFAC are, in general terms,

1. To work towards international technical, ethical, and educational guidelines — and towards reciprocal recognition of practice qualifications — through committees and subcommittees of IFAC;
2. To promote and assist in the development of new regional organizations; and
3. To arrange International Congresses of Accountants which will allow members of the profession worldwide to exchange ideas, to keep informed, and to reach broad conclusions on desired common aims.

BASIC OBJECTIVES OF IFAC's PROGRAM OF WORK

IFAC has developed a twelve-point work program to serve as a guide to IFAC committees and staff over the first five years.
The basic elements of this program are to:

1. Develop statements which can serve as guidelines for international and auditing guidelines;
2. Establish the basic principles which should be included in the code of ethics of any member body of IFAC and to refine or elaborate on such principles as deemed appropriate;
3. Determine the requirements and develop programs for the professional education and training of accountants;
4. Collect, analyze, research, and disseminate information on the management of public accounting practices to assist practitioners in more effectively conducting their practices;
5. Evaluate, develop, and report on financial management and other management techniques and procedures;
6. Undertake other studies of value to accountants, such as a possible study on the legal liability of auditors;
7. Foster closer relationships with users of financial statements including preparers, trade unions, financial institutions, industry, government, and others;
8. Maintain good relations with regional organizations and explore the potential for establishing other regional organizations, as well as assisting in their organization and development;
9. Establish regular communications among the members of IFAC and other interested organizations, principally through an IFAC Newsletter;
10. Organize and promote the exchange of technical information, educational materials and professional publications, and other literature emanating from member bodies.

11. Organize and conduct an international congress of accountants approximately every five years; and
12. Seek to expand the membership of IFAC.

IFAC has established the following committees in an attempt to deal with the foregoing work program.

1. Auditing;
2. Education;
3. Ethics;
4. International Congress;
5. Management Accounting;
6. Planning; and
7. Regional Organizations.

I can only tell you that it was no easy task to organize these committees. The problem, of course, was that the members are spread all over the world.

THE INTERNATIONAL AUDITING PRACTICES COMMITTEE (IAPC)

The aims of this committee are to develop and issue, on behalf of the Council of IFAC, guidelines on generally accepted auditing practices and the form and content of audit reports. It also seeks to promote, with the support of the Council, the voluntary acceptance of such guidelines.

IAPC comprises one nominated member from each of the following countries: Australia, France, India, Mexico, Philippines, the United States of America, Canada, the Federal Republic of Germany, Japan, the Netherlands, and the United Kingdom and Republic of Ireland.

The committee's inaugural meeting was held in New York in March 1978. While the major part of this meeting was occupied with the establishment of administrative and operating procedures, discussion on the work program indicated that there was a wealth of auditing experience represented on the committee.

It is my belief that auditing is potentially an international language to a greater extent than are taxation and accounting which tend to be influenced to a greater extent by national legislation. This view was supported by the review which the committee undertook of the standards already in force in member countries, for it was apparent that most of the differences were historical in nature with little technical justification.

While it was easy to reach agreement that the committee in its work should aim to use existing literature wherever possible and not

seek to "reinvent the wheel," this policy provides difficulties in practice as it remains to be determined which of the differing statements is to be chosen as the basis for drafting the international model.

INTERNATIONAL AUDITING GUIDELINES

Within each country, local conditions govern to a greater or lesser degree the auditing of financial information. Such regulations may be of a statutory nature or take the form of auditing standards or statements issued by professional or regulatory bodies, or possibly a combination of both.

AUTHORITY

It is important to recognize that the International Auditing Guidelines issued by IAPC do not and cannot override regulations governing the audit of financial information in any member country. To the extent that International Auditing Guidelines conform with local regulations on a particular subject, the audit of financial information in that country in accordance with local regulations will automatically comply with the International Auditing Guideline in respect to that subject. In the event of local regulations differing from, or being in conflict with, International Auditing Guidelines on a particular subject, member bodies, in accordance with the constitution of IFAC, should work towards the implementation of the Guideline issued by IAPC, when and to the extent practicable.

SCOPE

International Auditing Guidelines apply whenever an independent audit is carried out, that is, in the independent examination of financial information of any entity, whether profit oriented or not, and irrespective of its size, or legal form, when such an examination is conducted with a view to expressing an opinion thereon. International Auditing Guidelines may also have application as appropriate to other related activities of auditors. Any limitation of the applicability of a specific International Auditing Guideline is made clear in the introductory paragraph to that Guideline.

WORKING PROCEDURES

The agreed working procedure of IAPC is to select subjects for detailed study by a subcommittee established for that purpose. IAPC delegates to the subcommittee the initial responsibility for the prepara-

tion and drafting of auditing guidelines. The subcommittee studies background information in the form of statements, recommendations, studies or standards issued by member bodies, regional organizations, or other bodies, and as a result of that study, an exposure draft is prepared for consideration by IAPC. If approved by at least three-quarters of the total voting rights of IAPC, the exposure draft is widely distributed for comment by member bodies of IFAC, and to international agencies as IAPC may determine. Adequate time is allowed for each exposure draft to be considered by the persons and organizations to whom it is sent for comment.

The comments and suggestions received as a result of this exposure will then be considered by IAPC and the exposure draft revised as appropriate. Provided that the revised draft is approved by at least three-quarters of the total voting rights of IAPC, it will be issued as a definitive International Auditing Guideline becoming operative from the date specified in the guideline.

IAPC WORK PROGRAM

The initial work program was determined at the first meeting, and the committee has agreed that at least one new topic would be added at each meeting. Timing difficulties arise in setting a work schedule timetable because the multiplicity of languages in use by member bodies creates a translation problem. Allowing four months for translation and a similar period for exposure results in a period of twenty-one months from the commencement of the study to the final issue of a guideline.

The current work program of the committee is as follows:

Topic 1 — Objective and Scope of the Audit of Financial Statements
Subcommittee — Canada (chairman), Argentina, Mexico, and Switzerland.
Status — Approved by IAPC for issue as an exposure draft November 1978. Release date — February 1, 1979.

Topic 2 — Engagement Letters
Subcommittee — Germany (chairman), India, and Sweden.
Status — Approved as an exposure draft at the IAPC meeting held mid-March 1979. The exposure draft will be released on May 1.

Topic 3 — Basic Principles Governing an Audit
Subcommittee — Australia (chairman), Canada, and the Netherlands.
Status — Subcommittee currently reviewing fifth working draft. An-

ticipate approval as an exposure draft at the June 1979 IAPC meeting. This project covers general, performance, and reporting standards. It is regarded as the foundation project for the future work of IAPC, as practice guidelines will be issued elaborating on each of the basic principles in greater detail.

Topic 4 — Standard Inter-Bank Confirmation Letter — Special Project
Subcommittee — United Kingdom and Ireland (chairman), the Netherlands, Germany, and the United States (in liaison with the Group of Ten Bank Supervisors).
Status — First draft reviewed at IAPC March 1979 meeting.
This project was requested by the Group of Ten Central Bank governors. Approval for exposure is hoped for at the June IAPC meeting. Whether this document will be issued as an Auditing Guideline will be determined at a later date.

Topic 5 — Reliance on Other Auditors
Subcommittee — France (Chairman), United Kingdom and Ireland, and the United States.
Status — Chairman presented a points outline at the IAPC meeting in March 1979.

Topic 6 — Planning
Subcommittee — Netherlands (chairman), Hong Kong, and the Philippines.
Status — Chairman presented a points outline at the March 1979 IAPC meeting.
This is the first of the practice guidelines to be developed to amplify the basic principles.

At the committee's recent meeting, it was agreed that the next three topics to be undertaken by the commitee would be internal control, supervision and delegation, and evidence. We are presently in the process of organizing subcommittees for the first two of these topics.

RELATIONSHIP WITH IASC

IAPC hopes that it will be able to match the progress made by IASC since its formation in 1973. IFAC has established a close working relationship with IASC and both bodies are liaising on a regular basis. However, once IAPC has issued the International Auditing Guideline — Basic Principles Governing An Audit and the practice guidelines elaborating on each basic principle, a substantial part of our future work will be interdependent with that of IASC. Both committees will,

however, work in close cooperation and collaboration to ensure that there is harmony in our approach and output.

IAPC — THE FUTURE

The first exposure draft published in February is in itself simplistic and must be considered in the context of the work program detailed above.

It is likely that a period of from three to five years will elapse before the IAPC guidelines match auditing standards already on issue in most developed countries. This period should therefore be regarded as one of establishment and consolidation of its acceptance as the international authority on auditing matters. This acceptance can be achieved only by professional performance by IAPC, with the support of its member bodies and, in turn, by individual members of those bodies.

EDUCATION COMMITTEE

The terms of reference of this committee are to prepare a survey setting forth, for each member organization, a summary of the entry requirements, examination or alternative educational requirements, and practical experience requirements, and to develop guidelines on prequalification, training, and education. It will also review developments with respect to required continuing professional education and in due course will develop guidelines for members who are contemplating a move toward required CPE.

At its first meeting, the committee agreed to undertake the following programs of work:

1. Preparation of guidelines on
   (A) Prequalification education and training for an accountant
   (B) The theoretical content of studies and examinations indicating in general terms the educational content to which students of accountancy should be exposed
2. Preparation of a statement emphasizing the need for member bodies to develop programs of postqualifying education and to encourage member bodies which have developed such programs to make them available at reasonable prices to other bodies which do not have the resources to develop their own material.

ETHICS COMMITTEE

It is well established that ethics and independence are of vital concern to the accounting profession worldwide. This committee has as its terms

of reference to develop a suggested minimum code of professional ethics and to promote understanding and voluntary acceptance of such code.

A paper entitled "Professional Ethics for the Accountancy Profession" prepared by the committee was submitted to the November meeting of the Council for review and has been resubmitted to the May meeting of the Council with a request that the committee be authorized to send the paper to the member bodies of IFAC for their review and comment. The paper itself sets forth the statement of principles which should form the basis of a detailed code of ethics by which members of the profession should be guided in the conduct of their professional lives. In addition, the committee is in the process of developing detailed papers on each of the matters covered in the basic principles setting forth the advantages and disadvantages of each principle for use by the member bodies in preparing or modifying their own code of professional ethics. The committee has also begun work on a model code of ethics to which all members of IFAC might subscribe.

INTERNATIONAL CONGRESS COMMITTEE

The International Congress Committee has oversight of the plans and arrangements for the 1982 Congress. In broad and most tentative terms, I can report that the technical program will probably allow each participant to elect to participate in three discussion groups from among six technical subjects. At present, it is contemplated that the following technical subjects will be considered: (1) Image of the Profession; (2) Education of the Accountant; (3) Accounting Principles; (4) Auditing; (5) Management Accounting; and (6) Contribution of the Profession to Government.

Now that we have a formally constituted international organization, IFAC's committees are expected to take a leading role in the preparation of the background papers to be used as a basis for discussion by participants in the discussion groups.

MANAGEMENT ACCOUNTING COMMITTEE

It is well recognized that in many countries, management accountants — those not in public practice — equal approximately half of the total members of accounting bodies. IFAC recognizes that those who practice management accounting in industry, government, and else-

where are vitally affected by auditing and accounting standards. It is for these reasons that we have given significant recognition to this particular area of our membership. As such, preparers and users of financial statements are asked to contribute to the work of the Management Accounting Committee and to assist in advancing standards of management accounting in both developed and developing countries.

The Council of IFAC has placed the onus on this committee to encourage the development of management accounting and to undertake studies of direct concern to management accountants, as well as to stimulate an increased level of competence and thereby improve the standing and recognition of management accountants.

I look forward to this committee to develop papers on the following areas:

1. Boundaries of management accounting, the responsibilities of the management accountant, and the relationship of the management accountant and the auditor;
2. Framework to use when compiling a bibliography on management accounting; and
3. Concepts of information systems for nonprofit organizations.

It is also planned to obtain information on the participation by members not in public practice in the activities of the member bodies of IFAC.

REGIONAL ORGANIZATION COMMITTEE

As previously indicated, an important objective of IFAC through its Regional Organizations Committee is to encourage and promote common objectives and to develop guidelines for the structure and constitution of new regional organizations. In addition, the committee is in the process of developing a paper outlining the criteria to be used by IFAC for recognition of new regional organizations.

IFAC recognizes three regional organizations:

1. Confederation of Asian and Pacific Accountants (comprises twenty-eight member accounting organizations in twenty-one countries in Asia and the Pacific);
2. Interamerican Accounting Association (comprises twenty-eight member accounting organizations in twenty-two countries in the Americas); and
3. Union Européenne des Experts Comptables Economiques et Finan-

ciers (comprises twenty-seven member accounting organizations in twenty-one countries in Europe).

The committee's terms of reference also require it to see that the recognized regional organizations are invited to: (1) provide advice on and participate in the program of work of IFAC; (2) comment on draft guidelines; (3) make available to each other and to IFAC for their information and use, all studies or statements which they issue; (4) adopt, as appropriate, and publish to their own members, IFAC's guidelines, statements and studies; and (5) develop recommendations on communications between IFAC and regional organizations concerning their respective programs of work.

COUNCIL AND PLANNING

The Council is responsible for implementing the objectives of IFAC and overviews the work of the committees to satisfy itself that IFAC is moving steadily forward in fulfilling its objective — the development and enhancement of a coordinated, worldwide accountancy profession. A planning committee composed of members of the Council maintains relevance of IFAC's continuing objectives and contributes to their advancement by reviewing strategy plans and constitutional matters prior to discussion by the Council.

RELATIONSHIP WITH OTHER ORGANIZATIONS

The membership of IFAC now stands at seventy-two accountancy bodies in fifty-five countries representing over 700,000 accountants in public and private practice, education, and government service. As an organization, we have the capability and responsibility of assuming a greater role on the world scene on initiatives developed by other world organizations that have an impact on the profession. In this regard, considerable emphasis will be given to increasing the visibility and involvement of IFAC in such activities. As a start, I believe IFAC and the United Nations Centre on Transnational Corporations have developed mutually satisfactory working arrangements for keeping each other informed and, as appropriate, to provide guidance and assistance on matters of common interest.

In addition, it will be important that the closest cooperation and coordination be established between the International Accounting Standards Committee and IFAC so that the full impact of our resources and expertise can be brought to bear in a rational and re-

sponsible manner. In accordance with an agreement between both parties that the closest relationship should be maintained between IFAC and IASC, arrangements have been made between the officers of each organization to meet regularly, exchange information, and review the ways in which they can work together and perhaps in due course to formally integrate IASC into IFAC.

CONCLUSION

Our program will be considered by many to be ambitious but with goodwill and effort, IFAC can strengthen and enhance the significance of the role played by the accounting profession worldwide.

SFAS No. 8: Conforming, Coping, Complaining, and Correcting!

THOMAS G. EVANS and WILLIAM R. FOLKS, JR.*

INTRODUCTION

The primary purpose of this paper is to examine Statement of Financial Accounting Standards (SFAS) No. 8 and the response it evoked in multinational corporations (MNCs). This response is divided into four phases: how MNCs conformed to SFAS No. 8 in late 1975 or 1976; how they have coped with it since that time until the present; how they have complained about it during the same time period; and how they have tried to have it corrected, essentially a 1978-79 phenomenon. This paper is based on the authors' research study published by the FASB[1] and relies upon the questionnaire response of 156 U.S.-based MNCs. Exhibit 1 presents some data on the respondents.

CONFORMING: THE INITIAL IMPACT OF SFAS NO. 8

One of the reasons for the controversy over No. 8 is that it accomplished one of its main purposes. It put an end to the diversity in translation practices that existed prior to its issuance. Thus, many MNCs

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[1] Thomas G. Evans, William R. Folks, Jr., and Michael Jilling, *The Impact of Statement of Financial Accounting Standards No. 8 on the Foreign Exchange Risk Management Practices of American Multinationals: An Economic Impact Study* (Stamford, Conn.: Financial Accounting Standards Board, 1978).

Exhibit 1. Corporate Characteristics of Respondents

*Overall size of participating companies**			*Approximate relative size of foreign operations†*		
Consolidated annual sales in U.S. dollars, fiscal year, 1976 data	*156 firms from 1977 Number*	*Percent*	*Ratio of foreign sales to total sales on annual basis, 1976 data*	*156 firms from 1977 Number*	*Percent*
One billion and above	92	59.0	Below 20 percent	33	21.2
Between 300-1,000 million	50	32.0	Between 20-40 percent	86	55.1
Below 300 million	14	9.0	Above 40 percent	35	22.4
No response	0	0.0	No response	2	1.3
Total	156	100.0	Total	156	100.0

* 82.1 percent of the companies participating in this study were on the 1977 *Fortune* 500 list of largest industrial corporations.
† 31.4 percent of the companies participating in this study are "old" Multinational Corporations (MNCs) (achieved MNC status prior to 1960); 66.0 percent are "new" MNCs (achieved MNC status since 1960); another 2.6 percent did not respond to this question.

found that their translation practices had to be changed to conform to No. 8.

The introductory paragraph of SFAS No. 8 (paragraph 1) indicates that one of the three factors that highlighted the problems associated with currency translation was ". . . the acceptance in practice of significantly different methods of accounting."[2] Evidence to support this concern is found from the authors' survey. From the data in exhibit 2, it is clear that there were at least six different translation methods in use prior to the issuance of SFAS No. 8. The most popular alternatives were the current-noncurrent method, the monetary-nonmonetary method, and two variations of those methods. An analysis of the response to the survey, however, shows that only 29 of the 141 firms responding to this question (approximately 20 percent) were already in conformity with SFAS No. 8 when it was issued. Thus, 80 percent of the firms had some adjustments to make.

One area when an adjustment was likely to be needed was in the translation practices for inventories. According to a previous survey by the authors conducted in 1975 prior to the issuance of SFAS No. 8

[2] Financial Accounting Standards Board, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, Statement of Financial Accounting Standards No. 8* (Stamford, Conn.: FASB, 1975).

Exhibit 2. Translation Methods Used by U.S. Multinationals Prior to the Issuance of SFAS No. 8

Translation methods	*Respondent firms*	
	Number	*Percent*
Current-noncurrent method	54	34.6
Current-noncurrent method with noncurrent receivables and payables translated at the current rate	10	6.4
Monetary-nonmonetary method	22	14.1
Monetary-nonmonetary method with inventories translated at the current rate	41	26.3
Temporal method	7	4.5
Current rate method	4	2.6
Other	3	1.9
No response	15	9.6
Total	156	100.0

and based on the response of 107 firms,[3] 63 to 68 percent of the firms translated inventory at the current rate. However, SFAS No. 8 requires that inventory be translated at a historical rate in general. It was found that between 67 to 70 percent of the firms were now translating inventory at the historical rate in conformance with SFAS No. 8.

Exhibit 3 presents the firms' methods of treating translation gains and losses. This exhibit shows that the majority of respondents were already in conformity with the FASB in that they recognized such gains and losses in current income. However, approximately 37 percent were deferring gains and losses according to some criteria and faced some adjustment to come into conformity with No. 8.

Because it was suspected that firms faced some adjustment to SFAS No. 8,[4] some direct questions on this issue were posed. To obtain a measure of the cost of conforming to SFAS No. 8, firms were asked first to assess qualitatively their initial implementation effort to SFAS No. 8 and then to quantify their estimate of the cost of that effort. Results are presented in exhibits 4 and 5. The largest number of firms reported that they needed only a "minor effort" to conform to SFAS No. 8; only eleven firms said it took "no effort"; and twenty-three firms indicated it took a "major effort." In terms of their estimate of the total

[3] Michael Jilling, *Foreign Exchange Risk Management in U.S. Multinational Corporations* (Ann Arbor, Mich.: UMI Research Press, 1979).
[4] Thomas G. Evans, "Diversity in Foreign Currency Translation Methods — A Proposal for Uniformity," *CPA Journal* (February 1974).

Exhibit 3. Translation Gain and Loss Treatments Used by U.S. Multinationals Prior to the Issuance of SFAS No. 8

	Respondent firms	
Gain and loss treatment	*Number*	*Percent*
Recognize in income currently	80	51.3
Defer based on certain criteria	58	37.2
Adjust stockholders' equity	1	0.6
Amortize over life of long-term debt	2	1.3
Adjust cost of nonmonetary assets or amortize over life of such assets	0	0.0
Other	7	4.5
No response	8	5.1
Total	156	100.0

Exhibit 4. Degree of Effort Required by U.S. Multinational Corporations to Conform Their Translation Methods to SFAS No. 8

	Respondent firms	
Degree of effort	*Number*	*Percent*
No effort necessary	11	7.1
Minor effort	62	39.8
Moderate effort	59	37.8
Major effort	23	14.7
No response	1	0.6
Total	156	100.0

Exhibit 5. Cost of the Initial Implementation Effort at U.S. Multinational Corporations Due to SFAS No. 8

	Respondent firms	
Cost	*Number*	*Percent*
Under $5,000	27	17.3
$5,000-10,000	26	16.7
$10,000-20,000	14	9.0
$20,000-50,000	29	18.6
$50,000-100,000	15	9.6
Over $100,000	20	12.8
No response	25	16.0
Total	156	100.0

clerical, managerial, and auditing cost of that initial implementation effort, the largest number of firms claimed it cost between $20,000 and $50,000 each. Twenty firms reported that their cost was over $100,000. The average cost was $35,000 per firm, in the authors' opinion not a significant figure.

COPING WITH NO. 8

Since firms found themselves living with No. 8 (especially since the FASB voted not to reconsider it in April 1976), they have turned to a number of tools to help cope with the requirements of the standard. These tools are labeled "exposure adjustment techniques" in the authors' report, and at least twenty-one separate tools were recognized. A substantial part of the research report concentrates on these tools and the degree of utilization associated with them by MNCs since the issuance of SFAS No. 8. The following summary presents the highlights for the findings with regard to this important subject:

> Financial exchange risk management techniques are the most widely used. The most popular technique, in an overall sense, is to increase the foreign-currency borrowing levels in weaker currencies. Second is the acceleration or deceleration of subsidiary dividend payments. From a usefulness viewpoint, firms ranked increasing borrowing levels as first and forward exchange contracts as second.
>
> Firms have made noteworthy changes in overseas borrowing patterns since January 1, 1976. They have reduced borrowings in the German mark and Swiss franc and increased borrowings in the British pound, Canadian dollar, French franc, and the Mexican peso. Borrowings stayed at the same level in the Japanese yen.
>
> Firms have been using forward contracts to cover their accounting exposure more extensively since January 1, 1976. This is particularly true in the following currencies: Canadian dollar, French franc, German mark, Japanese yen, and Mexican peso. The firms also reported to us that the volume of their forward contracts has expanded substantially.
>
> A majority of the respondents believed that it is possible to hedge accounting exposure selectively with a reasonable prospect of success. The belief that there is a payoff to the firm from the selective use of forward contracts is even more widely held.**[5]

It was also found that the pre-SFAS No. 8 translation and exchange gain or loss treatment practices have had a significant impact on how firms have coped with No. 8. Particularly with regard to the use of forward contracts, those firms that were required to change their accounting practices to conform to SFAS No. 8 have increased their use

[5] Details on the views of respondents on any issue marked "**" are presented in exhibit 6.

of forward contracts more than other firms. These results led to the conclusion that the firms that did not conform to SFAS No. 8 when it was issued are pursuing more aggressive FERM[6] programs.

Exhibit 6. Opinions and Views of the Respondents on Selected Issues

There is a payoff to the firm from the selective use of forward-exchange contracts.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
14.7	50.2	19.2	11.5	3.8	0.6

Currently prevailing accounting principles mislead management, stockholders, and security analysts, because the cost of protection against exchange-rate changes is not separately identified, while exchange gains and losses can be highly visible in the consolidated income statements of multinational corporations.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
47.4	35.9	10.3	3.8	1.3	1.3

Our company needs a more flexible method of translating foreign-currency balance sheet items than SFAS No. 8.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
38.5	21.8	26.9	7.7	4.5	0.6

[6] Foreign Exchange Risk Management = FERM.

Exhibit 6 (cont.)

Current accounting principles allow a satisfactory measure of the total effect of an exchange-rate adjustment.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
1.9	14.1	15.4	25.0	43.0	0.6

The translation principles of SFAS No. 8 result in an accurate measure of a firm's actual exposure to foreign-exchange risk.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
1.3	9.6	12.8	31.4	44.3	0.6

SFAS No. 8 is causing American financial management to overemphasize the income impact of foreign-exchange gains and losses as compared to financial considerations (cash flows) in decision making.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
32.1	43.6	13.5	8.3	0.6	1.9

Investment in inventory is not subject to exchange risk.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
2.6	7.1	3.2	26.3	59.5	1.3

A foreign-exchange reserve, set up specifically to cushion the effect of foreign-exchange gains and losses on the consolidated income statement, is the best approach to deal with foreign-exchange risk.

Exhibit 6 (cont.)

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
23.7	23.1	21.8	17.3	13.5	0.6

Exchange-rate adjustments should be deferred when the exchange-rate change that brought about the adjustment is considered temporary.

Extent of agreement and the percent of respondent firms					
Strongly agree	*Agree*	*Not sure*	*Disagree*	*Strongly disagree*	*No response*
14.7	29.5	18.6	19.2	16.7	1.3

COMPLAINING ABOUT NO. 8

The controversial nature of SFAS No. 8 is almost legendary in modern standard setting. Certainly it has created a storm of protest that continues today. The complaints associated with No. 8 fall into two basic categories: (1) that the requirement in No. 8 that all translation gains and losses be recognized in current income causes the reported earnings fluctuations of MNCs to increase and thus adversely affect the market price of their common stock, and (2) that the management of MNCs attempt to avoid any anticipated increase in the volatility of reported earnings by an increase in the use or change in the nature of FERM practices. This second concern is often referred to as "chasing unrealized items with cash." Additionally, a third area of complaint has been raised at times; this is that the MNCs' hedging activities in the world's currency markets, because of SFAS No. 8, puts downward pressure on the American dollar. This issue was addressed at a meeting held by the United States Treasury in July 1978.

The firms in our survey were sharply critical of SFAS No. 8 in the following areas:

> A little more than 82 percent of the respondents agreed that Statement No. 8 has been an important source of concern to their firms. Their concern focused on the requirement in No. 8 that translation gains and losses be reflected in current income.

A total of 83.3 percent believed that No. 8 misleads management, stockholders, and security analysts because the cost of protection against exchange-rate changes is not separately identified, whereas exchange gains and losses are highly visible in financial statements.**

The respondents also agreed strongly (60.3 percent) that they needed a more flexible translation method for foreign-currency balance sheets than No. 8.**

Also, 68 percent of the management surveyed believed that SFAS No. 8 did not allow a satisfactory measure of the total effect of a rate change. And there was stronger agreement (over 75 percent) that the translation practices of No. 8 do not result in an accurate measure of the actual exposure to foreign-exchange risk.** Further, firms claimed that an accounting-based measure of exposure following SFAS No. 8 is incomplete in that certain future transactions which are exposed are not recorded as part of the accounting exposure.

A large number of our respondents (75.7 percent) agreed that SFAS No. 8 causes American financial management to overemphasize the reported earnings impact of foreign-exchange gains and losses as compared to other financial considerations (e.g., cash flows).**

The complaints and criticisms of No. 8 may well have led the FASB to initiate its research program on the economic consequences of already issued financial accounting standards in April 1977. It is noteworthy that two of the four projects funded by the board dealt with No. 8.

Additionally, the FASB initiated a postenactment review process on FASB Standards Nos. 1 to 12 in May 1978. Firms were invited to submit written comments on these statements (those in effect for at least two years) and had until August 15 to submit their letters. By October 15, 205 written comments were received. Some concerned only one FASB Standard and others commented on a number of standards. But clearly, SFAS No. 8 was the most popular: 176 letters (85.5 percent) either directly or indirectly mentioned SFAS No. 8; and 174 of these (98.8 percent) were negative on SFAS No. 8 and suggested that it should be re-examined by the board.

In addition to this postenactment review, the board held a "Public Meeting-Evaluation Project on SFAS No. 8" in Stamford on January 12, 1979. Representatives of thirteen firms were invited to attend and were given an opportunity to present their main concerns with SFAS No. 8 and to interact with the board, the FASB staff, and each other on this topic. Further, some potential changes to SFAS No. 8 were presented and discussed.

CORRECTING SFAS NO. 8

The controversy, complaints, and criticisms over SFAS No. 8 have led the FASB to consider making some changes in it. Although the board has committed itself to change No. 8 and has received the SEC's approval for this, the form of the change is still unclear. The following is a list of possible changes to No. 8 that the board is asking its staff to consider:

1. Expansion or change of disclosure requirements;
2. Presentation of translation gains and losses on the income statement in a manner similar to extraordinary items;
3. Translation of inventory at the current rate;
4. Deferral of translation gains and losses in a separate statement apart from the income statement; and
5. Adoption of the current-rate method of translation.[7]

The authors' study obtained the views of exchange risk managers on some of these and similar issues:

Almost 86 percent of the respondents agreed that inventory is exposed to exchange risk.** This supports the idea of translating inventory at the current rate.

More than 46 percent of the management agreed that the best approach to deal with foreign-exchange risk is a foreign-exchange reserve established to cushion the effect of foreign-exchange gains and losses on the consolidated income statement.**

A little more than 44 percent of the respondents agreed with the notion that exchange gains and losses should be deferred when the exchange-rate changes that caused them are considered as temporary.**

From exhibit 2, it is clear that a small minority of firms in our survey were using the current-rate method prior to the issuance of SFAS No. 8.

CONCLUSION

SFAS No. 8 may well appear to future generations of accountants as a milestone in modern standard setting. It is a standard of financial accounting long needed and issued in response to excessive diversity in practice. It was issued after a long study by the FASB and after following its due process procedure. It had a wide impact on firms and

[7] "FASB Adds Project to Agenda to Amend Statement No. 8," *Journal of Accountancy* (March 1979): 20.

led to controversy. But the board did not react to this controversy in a "knee-jerk" fashion; instead, it proceeded in an orderly manner and commissioned two outside studies on the impact of SFAS No. 8 and provided channels for the comments of those affected by the standard. It now appears that all this will lead to a change for the better in No. 8. And this may go down in the history of accounting standard setting as an example of how the process should work.

A Note on Translation for Interim Accounts

ANDREW G. PIPER*

The discussion memorandum on interim financial accounting and reporting[1] suggested that "any changes in current practices could either dampen or add to the variations in quarterly earnings reported under present financial accounting standards."[2] Although it made no specific mention of the translation rate, this is clearly one item which could cause earnings to fluctuate. SFAS No. 8[3] asked, if practicable, "for the effects of rate changes on reported results of operations . . . [to] be described and quantified." (par. 33)

It may be argued that the choice of rate to be used cannot be decided until we know whether an "integral" or "discrete" view of interim earnings is being taken. However, firms do have to report and have reported in the past, as might be expected, that there is a wide range. Examples are cited below.

UNILEVER

The results for the quarter and the first nine months and the comparative figures for 1977 have been calculated at comparable rates of exchange. These are based on £1 = FL4.36 = U.S. $1.91 which were the closing rates of 1977. Total concern profit attributable to ordinary

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[1] Financial Accounting Standards Board, *An Analysis of Issues Related to Interim Financial Accounting and Reporting* (Stamford, Conn.: FASB, 1978).

[2] Ibid., p. i of insert "An Executive Summary of the Discussion Memorandum on Interim Financial Accounting and Reporting."

[3] *Statement of Financial Accounting Standards No. 8, Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements* (Stamford, Conn.: FASB, 1975).

capital for the current quarter and first nine months has also been recalculated at the rates of exchange current at the end of September 1978, being based on £1 = FL4.17 = U.S. $1.98[4] [only revenue account, i.e., no balance sheet].

REDLAND

Overseas currency figures for the half year to September 23, 1978, have been converted at rates of exchange ruling on that date and the figures for the half year to September 24, 1977, and for the year to March 25, 1978, have been converted at rates of exchange ruling on March 27, 1978.

SCAPA

The continuing strength of the pound against the U.S. and Canadian dollars has reduced the effect in sterling terms of an increase in North American profits. . . . [No figures for this effect.]

PICC

Foreign currencies have been translated into sterling at the rates ruling at the end of the appropriate accounting period. Movements in exchange rates during 1978 [up to June 6, 1978] have not had a material impact on the group results.

LAMSON

All conversions in the 1977 figures have been made at the rates of exchange ruling at end of June 1977. By using these rates in place of those adopted at December 31, 1976, the sterling value of the profits before tax for the half year ended June 30, 1977, is decreased by approximately £14,000 and turnover by £762,000. The half year's figures for 1976 have been adjusted to reflect the rates of exchange adopted at end December 1976.

BP

The reported income in sterling is extremely sensitive to movements in exchange rates and to the complex reaction these movements have on trading conditions. This applies particularly to the U.S. dollar which is the main currency in which oil is traded. In the third quarter the rate for the U.S. dollar against sterling fell by 12¢ against a 3¢ reduc-

[4] Unilever results third quarter and first nine months 1978.

tion in the corresponding period of 1977. The effect of this fall on the translation of income from operations in the United States and dollar cash balances in U.K. companies held to meet dollar commitments is estimated to have reduced reported income by £43 million in the third quarter of 1978. This compares to a reduction of £7 million in the corresponding quarter of 1977.

These amounts can be related to income before taxation of £530 million and £506 million, or a reported increase of £24 million after allowing for £36 million extra reduction or £60 million before this fall.

Another aspect to be considered is the reporting currency adopted by the company. Not all companies with overseas assets and earnings will be obliged to produce multicurrency statements, but Unilever, for example, reports in at least three languages. The interim reports are available in American, Dutch, and English and, more relevant for our purpose, in dollars, florins, and pounds. The example in Appendix 1 (English) provides the format used for the three reports.

The line "Total concern profit attributable to ordinary capital at rates of e xchange ruling 31/12/77" showing an increase of +20 percent for the third quarter of 1978 compared with 1977 is the same for all three. The subsequent lines are different, reflecting the effect of the difference arising on recalculation of current period results at end-of-period rates of exchange. This becomes substantial when considering the figure of earnings per share.

	Change third quarter (%)	*Change nine months (%)*
The "bottom line" earnings per share	£ +21	+ 8
compared to similar figures from American	$ +25	+12
Dutch	FL +16	+16

The problem of comparability is recognized by Unilever in a different manner when the company publishes the provisional results for the fourth quarter and year.

The results and earnings per share for the full year 1977 have been calculated at the closing rates for 1977. The 1976 figures for the full year are based on the closing rates for 1976. The trends are therefore influenced by the change in exchange rates during the year. For comparison purposes, the trends have also been shown based on the comparable rates of exchange.

		1977–1976		1978–1977	
		At closing rates (%)	At comparable rates (%)	At closing rates (%)	At comparable rates (%)
in $	Sales to third parties	+18	+11	+14	+ 8
	Earnings per share	+ 1	− 5	+11	+ 5
in FL	Sales to third parties	+ 9	+11	− 2	+ 8
	Earnings per share	− 6	− 5	− 4	+ 5
in £	Sales to third parties	+ 5	+11	+ 8	+ 8
	Earnings per share	−10	− 5	+ 5	+ 5

Appendix 2 shows how the quarterly results are summarized in the annual accounts and report. The presentation draws attention to the difference in the figures for earlier quarters caused by the use of end-of-quarter rates originally, and the end-of-year ones; there is not very much in the case of the third quarter 1978 (shown in Appendix 1). It is also interesting to note that the earnings per share for 1978 was higher than for 1977 in pence per 25p share but lower in florins.

The recent report by Dukes considers the fluctuations that have taken place in currency exchange rates on a monthly basis.[5] Particularly appropriate to quarter interim reports is the fluctuation from quarter to quarter. Appendix 3 considers this for the £ sterling/ dollar and indicates that during twenty-eight of the thirty-six possible year ends between March 31, 1970, and December 31, 1978, there was a reversal of an earlier change. In only eight periods of a year were the four changes in the same direction.

CONCLUSION

Presumably an investor is interested in accounts and dividends and share prices in his own currency (or purchasing power) which would suggest that the use of closing rates at the interim reporting stage is desirable. As with the annual accounts, identification of the effect of changing rates should also be disclosed if practicable. Unilever has shown that it is practicable to include both on the one statement. There is some indication that fluctuations in reported profits would be less if the rate(s) used at the end of the previous year were used for the interim reports until the next year end.

[5] R. E. Dukes, *An Empirical Investigation of the Effects of Statement of Financial Accounting Standards No. 8 on Security Return Behavior* (Stamford, Conn.: FASB, 1978).

APPENDIX 1.

The Directors of Unilever announce the results for the third quarter and for the first nine months of 1978, and the interim Ordinary dividends in respect of 1978.

Exchange rates

As has been our practice the results for the quarter and the first nine months and the comparative figures for 1977 have been calculated at comparable rates of exchange. These are based on £1 = Fl.4.36 = U.S. $1.91, which were the closing rates of 1977. Total Concern profit attributable to ordinary capital for the current quarter and the first nine months has also been recalculated at the rates of exchange current at the end of September 1978 being based on £1 = Fl.4.17 = U.S.$1.98.

Combined results

Third quarter 1978	Third quarter 1977	Increase/ (Decrease) %	(£ millions)	Nine months 1978	Nine months 1977	Increase/ (Decrease) %
			Sales to third parties			
2,487	2,282	+9	— Combined	7,259	6,828	+6
1,054	976		— Limited	3,089	2,922	
1,433	1,306		— N.V.	4,170	3,906	
162·3	135·4	+20	**Operating profit**	447·0	413·6	+8
—	3·9		Non-recurring items	(1·4)	3·9	
20·3	14·8		Concern share of associated companies' profit before taxation	56·3	43·2	
0·6	0·6		Income from trade investments	1·1	1·1	
(12·0)	(9·8)		Interest	(35·4)	(28·7)	
(13·2)	(10·7)		Interest on loan capital	(35·4)	(33·3)	
1·2	0·9		Other interest	—	4·6	
171·2	144·9	+18	**Total concern profit before taxation**	467·6	433·1	+8
			Taxation on profit of the year:			
(73·6)	(64·0)		Parent companies and their subsidiaries	(207·3)	(199·6)	
(10·0)	(7·0)		Associated companies	(28·2)	(20·3)	
			Taxation adjustments previous years:			
(0·2)	(0·6)		Parent companies and their subsidiaries	(1·5)	(1·2)	

APPENDIX 1. (cont.)

Third quarter 1978	Third quarter 1977	Increase/ (Decrease) %	(£ millions)	Nine months 1978	Nine months 1977	Increase/ (Decrease) %
(0·1)	—		Associated companies	(2·1)	—	
(6·6)	(6·1)		Outside interests and preference dividends	(17·0)	(16·3)	
(5·7)	(5·2)		Outside interests	(14·3)	(13·6)	
(0·9)	(0·9)		Preference dividends	(2·7)	(2·7)	
80·7	67·2	+20	Total concern profit attributable to ordinary capital at rates of exchange ruling 31/12/77	211·5	195·7	+8
0·5			Difference arising on recalculation of 1978 results at end September 1978 rates of exchange	0·6		
81·2	67·2	+21	**Total concern profit attributable to ordinary capital**	**212·1**	195·7	+8
41·7	36·8		— Limited	110·4	109·8	
39·5	30·4		— N.V.	101·7	85·9	
21·86p	18·09p	+21	Earnings per 25p of capital	**57·10p**	52·69p	+8

Source: Unilever results, third quarter and first nine months 1978.

APPENDIX 2. QUARTERLY RESULTS

	1st Quarter	*2nd Quarter*	*3rd Quarter*	*4th Quarter*	*Total year*
Sales to third parties					
1978 £ million	**2,291**	**2,486**	**2,480**	**2,585**	**9,842**
%	**23**	**26**	**25**	**26**	**100**
1977 £ million	2,222	2,324	2,282	2,319	9,147
%	24	26	25	25	100
Operating profit					
1978 £ million	**108**	**179**	**163**	**151**	**601**
%	**18**	**30**	**27**	**25**	**100**
1977 £ million	118	160	136	127	541
%	22	29	25	24	100

APPENDIX 2. (cont.)

		1st Quarter	*2nd Quarter*	*3rd Quarter*	*4th Quarter*	*Total year*
Profit before taxation						
1978	**£ million**	**110**	**185**	**170**	**144**	**609**
%		**18**	**30**	**28**	**24**	**100**
1977	£ million	124	164	145	117	550
%		23	30	26	21	100
Profit attributable to ordinary capital						
1978	**£ million**	**46**	**84**	**80**	**63**	**273**
%		**17**	**31**	**29**	**23**	**100**
1977	£ million	50	79	67	62	258
%		19	31	26	24	100
Earnings per share						
1978	**pence per 25p**	**12.28**	**22.56**	**21.64**	**16.96**	**73.44**
florins per Fl.20		**3.27**	**5.99**	**5.76**	**4.51**	**19.53**
1977	pence per 25p	13.41	21.19	18.09	16.78	69.47
florins per Fl.20		3.89	6.16	5.26	4.88	20.19

The published results for each of the quarters of both years have been recalculated at the year-end rates of exchange which have been used for the results of the respective years.

The figures in the table therefore differ from the figures originally published for each quarter.

Quarterly results are published in leaflet form in the English and Dutch languages. Shareholders and others wishing to be included in the mailing lists for these leaflets should apply to: Information Division, P.O. Box 68, Unilever House, London EC4P 4BQ, or to Unilever N.V., Rotterdam.

Source: Unilever Annual Report and Accounts, 1978, p. 14.

APPENDIX 3.

Relative change in exchange rate (expressed as percentage of end of previous quarter)

Quarter to quarter: Last working day in each quarter

		Spot U.S. dollar per U.K. pound			
Year	*1st Qtr*	*2nd Qtr*	*3rd Qtr*	*4th Qtr*	*Year*
1969		−0.00147	−0.00360	+0.00755	
1970	+0.00250	−0.00478	−0.00305	+0.00243	
1971	+0.00556	+0.00112	+0.02719	+0.02684	

APPENDIX 3. (cont.)

	Spot U.S. dollar per U.K. pound				
Year	*1st Qtr*	*2nd Qtr*	*3rd Qtr*	*4th Qtr*	*Year*
1972	+0.02492	−0.06568	−0.01011	−0.02967	
1973	+0.05519	+0.04210	−0.06510	−0.03745	
1974	+0.03013	−0.00104	−0.02865	+0.00729	
1975	+0.02260	−0.09078	−0.06450	−0.00993	
1976	−0.05313	−0.06843	−0.07099	+0.02038	
1977	+0.01063	+0	+0.01587	+0.09785	
1978	−0.02919	−0.0011	+0.06095	+0.03399	

Number of changes analyzed between + and − for company year end at end of:

	1st Qtr		*2nd Qtr*		*3rd Qtr*		*4th Qtr*	
	−	+	−	+	−	+	−	+
1970	2	2	2	2	2	2	2	2
1971	2	2	1	3	–	4	–	4
1972	–	4	1	3	2	2	3	1
1973	3	1	2	2	2	2	2	2
1974	2	2	3	1	3	1	2	2
1975	2	2	2	2	2	2	3	1
1976	4	–	4	–	4	–	3	1
1977	2	2	1	3	–	4	–	4
1978	1	3	2	2	2	2	2	2

Summary

−	+					*Total*
0	4	1	0	2	2	5
1	3	1	3	0	0	4
2	2	5	4	5	4	18
3	1	1	1	1	3	6
4	0	1	1	1	–	3

Balance sheet items translated at closing rates, long-term loans in particular, would have reflected larger changes using actual "end of quarter rate" rather than end of previous year rate for subsequent interim periods.

Source: Bank of England Quarterly Bulletins.
+ indicates more dollars are required to purchase one pound.

ASEAN Federation of Accountants: A New International Accounting Force

FREDERICK D. S. CHOI*

It has been said that the destiny of human affairs in the last quarter of the twentieth century will be decided in the Pacific.[1] Supporting this contention, Norman Macrae, associate editor of the *Economist,* writes that the period 1775 to 1875 was one of British economic dominance based on innovations in steam power and steel-making technology. This "British Century" was followed by the "American Century" of 1875 to 1975. During this period, the United States became the world's leading industrial power because of its superiority in automotive, aircraft, and computer technology. Today, the American century is evolving into what Macrae calls the "Pacific Century" based on (1) the remarkable economic achievements of countries such as Japan, South Korea, Taiwan, and Singapore, together with the demonstration effects of these achievements on the remainder of Asia; (2) the Pacific Basin's enormous market potential; (3) China's recent shift toward a new pragmatism that will down play ideology in favor of economic development; (4) the growing economic importance of the West Coast of the United States relative to the East Coast; (5) further advances in transportation and communication technology; and (6) the growing economic cohesiveness among neighboring Pacific countries.[2]

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[1] Based on the comments of Tun Tan Siew Sin, Chairman Sime Darby Holdings, Ltd. in a speech presented at the First ASEAN Federation of Accountants Conference in Manila, November 21-24, 1978; reprinted as "A Role for The Private Sector," *Asian Finance* (February 1979).

[2] Jiro Tokuyama, "Meeting the Pacific's Promise," *Asian Wall Street Journal* (23 June 1978), p. 4.

In terms of this last consideration, Pacific nations today are acutely aware that in an interdependent world, no nation can hope to solve all of its development problems alone. At the same time, none appears ready to embrace the concept of economic globalism. Regionalism is, therefore, proffered as a logical compromise between purely nationalistic and global philosophies. Accordingly, a number of regional economic groupings has been formed, the most notable being the Association of Southeast Asian Nations (ASEAN). However, while ASEAN is today a going concern, little is known of the accounting dimensions of this regional association. This paper, therefore, examines the emerging phenomenon of ASEAN accounting cooperation and its nature, purpose, problems, and functional organization, especially with respect to the promulgation of regional accounting standards in Southeast Asia. It will also explore the implications of this development for (1) other regional accounting organizations in the Pacific, and (2) the establishment of accounting standards internationally.

ASEAN — NATURE AND PURPOSE

In ancient times, the lands that now comprise ASEAN — Indonesia, Malaysia, the Philippines, Singapore, and Thailand — were joined by land bridges facilitating economic and social interaction. In time, these land bridges disappeared and were replaced by nautical routes traversed by ships of commerce whose contents, even today, are being excavated from archaeological sites throughout the region. These ships ceased to sail during the period of colonial domination that began in the fifteenth century. During the next four hundred years, the mercantilist policies of Britain, the Netherlands, and, eventually, the United States prevailed. With the rise of nationalism and the political independence movement that has followed, nations of the Southeast Asian archipelago are today attempting to renew the land and nautical bridges of old through new financial and industrial ties.

The Association of Southeast Asian Nations was formed just twelve years ago to accelerate the economic development of its member countries and to promote peace and freedom among the non-Communist countries of the region. Underlying this spirit of cooperation was a genuine fear that ASEAN members could very well fall like "dominoes" to Asian communism.[3] In terms of tangible progress, however, perhaps more has been accomplished during the last two years than in the

[3] "Five Nations Draw Closer to An Economic Linkup," *Business Week* (25 September 1978), p. 68.

previous ten years of this group's existence. A start has been made in stimulating closer regional trade by reciprocal tariff reductions, not unlike the European Economic Community, and a movement is now underway to establish a free-trade zone in the area. A complementary industrial program is also taking shape with the identification of region-wide projects being established in each of the member countries.

This recent flurry of activities reflects a new sense of urgency following heightened Sino-Soviet rivalry in Indochina. The specter of growing superpower conflict in the region has convinced ASEAN heads of state that a united front based on visible economic strength and cohesion is critical to the long-run stability and neutrality of the region. Moreover, in conformity with their commitment to the free enterprise system, ASEAN governments are looking to the private sector, both within and outside the region, to play a significant role in helping to achieve greater regional cooperation and development.

INTERNATIONAL ACCOUNTING DIMENSIONS

The foregoing discussion suggests that the concept of economic regionalism envisioned by the ASEAN countries is premised on expanded trade and investment flows. These flows, in turn, necessitate that the products of the accounting process travel beyond the confines of a single nation. This is where the international accounting problem arises. At present, foreign investors must understand and utilize locally oriented accounting reports. To insure the continuous flow of investment funds from foreign investors, ASEAN enterprises need to provide understandable and comparable financial reports so that these investors can properly evaluate the risk and return dimensions of their contributed capital. Moreover, intraregional joint ventures among ASEAN business enterprises are expedited if financial statements prepared in one ASEAN country are understandable in the context of accounting principles and practices in another.

Currently, accounting principles among the five ASEAN countries are by no means uniform. In a larger context, accounting and disclosure norms in the region also vary from those adopted and understood in countries outside ASEAN. This situation often necessitates the costly preparation of multiple sets of financial statements to accommodate accounting diversity.

Consequently, regional harmonization of accounting and financial reporting practices is today being seriously courted by the accounting professions in ASEAN. The establishment of a sound basis of financial

communication is recognized as the foundation of the financial infrastructure necessary to support foreign investment and regional joint ventures of the magnitude envisioned by the ASEAN pact. The fact that a majority of the ASEAN countries are at similar stages of their economic development bodes well for the feasibility of this massive harmonization effort.

OBSTACLES TO HARMONIZATION

While harmonization of accounting and financial reporting principles in ASEAN seems a workable undertaking, the path to harmonization will not be a smooth one. Alindada and Casino cite a number of obstacles to harmonization which are summarized below.[4]

Historical Ties

As mentioned earlier, ASEAN countries were formerly under foreign rule, with Thailand as a notable exception. As a result, accounting practices in these countries have been significantly influenced by those of the respective "mother countries." Accounting practices in the Philippines are largely patterned after those generally accepted in the United States. Accounting standards in Malaysia and Singapore reflect the British influence, while Indonesian accounting practices largely mirror the influence of the Dutch. Foreign-based multinational companies (primarily American) are also a growing feature of the ASEAN scene. The reporting practices of these companies add yet another dimension to accounting norms in Southeast Asia. Finally, accounting education systems in ASEAN have also been influenced by historical ties. This factor will no doubt continue to perpetuate differences in accounting practices in the region.

Government Laws and Regulations

Existing laws and regulations of ASEAN governments also impact the development of financial reporting standards. National legislation affects the types of accounting records to be maintained, the form and content of financial statements to be filed, reporting periods to be observed, and the manner of recognized revenue and expense for tax purposes. Tax laws in certain ASEAN countries, for example, do not permit deductions for depreciation on buildings. Consequently, de-

[4] Carlos R. Alindada and Jesus A. Casino, "Harmonization of Accounting Principles and Standards," *Technical Papers* (First AFA Conference and Thirty-second PICPA National Convention, Manila, Philippines, November 22-25, 1978), pp. 43-45.

preciation of buildings for financial reporting purposes is likewise uncommon in these countries, a practice that may be difficult to change.

Environmental Differences

Differences in environmental circumstances also promise to complicate ASEAN harmonization efforts. Thus, public ownership of corporate securities in a country such as the Philippines suggests financial reporting and disclosure principles unlike those applicable to predominantly family-owned corporate interests as in Thailand. Similarly, agrarian economies such as Indonesia and Thailand may require accounting systems differing from those utilized by an economy based largely on trade and financial institutions, such as Singapore.

DIFFERENCES IN ACCOUNTING AND FINANCIAL REPORTING

The foregoing considerations explain to a large extent the diversity within ASEAN in regard to the preparation of annual reports and their underlying accounting premises. Before examining organizational efforts aimed at reducing such diversity, let us first consider some of the basic accounting and financial reporting differences among the respective ASEAN countries.[5]

Disclosure Legislation

Malaysia, Singapore, the Philippines, and Thailand possess national regulations requiring the publication of annual financial statements by groups or individual companies. While this is not the case for Indonesia, companies listing their shares on the Indonesian Stock Exchanges are required to do so. In both Indonesia and the Philippines, this publishing obligation relates to reports of individual companies only. Consolidated statements are not required. The publication of annual financial statements of the parent company as well as consolidated financial statements of domestic companies is required in Malaysia, whereas in Thailand only annual financial statements of the parent company must be disclosed. Singapore stands alone in mandating the publication of parent-company as well as consolidated financial statements of the worldwide group. This no doubt is due to Singapore's role as a leading financial center in the Pacific.

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[5] The following analysis draws on data obtained in a recent questionnaire survey compiled by the 1978 AFA Committee on Accounting Principles and Standards. The author is especially grateful to its chairperson, Mrs. Estela Macuja, for making the results of that survey available.

Financial Statement Principles

Uniform accounting principles underlying the publication of financial statements are present in four of the five ASEAN member countries. Thailand, being the exception, follows generally recognized noncodified principles; that is, certain accounting concepts are considered so fundamental to the reporting process that they are considered mandatory by the profession even in the absence of statutory or professional pronouncements.

Professional Involvement in Standard Setting

Professional accounting associations play an active role in the development of accounting principles in all ASEAN countries. However, decision-making authority with respect to the promulgation of accounting standards is not enjoyed by the Thai accounting profession to the same extent as the professions in the other four countries. The professions in all five countries are reportedly exerting efforts to harmonize local accounting principles on an international basis with Singapore implicity adopting principles prescribed by the International Accounting Standards Committee.

Application of Accounting Principles and Practices

Contrasting the application of specific principles and practices in a five-nation setting is a major undertaking and exceeds the scope of this paper. Therefore, the principles/practices chosen for analysis are highly selective. It should also be noted that the data analyzed represent the responses of national accounting organizations surveyed in each of the respective ASEAN countries. The responses reflect the attitudes and views of these organizations and simply provide a general overview of what is and is not applicable from country to country.

Consider, first, the area of consolidation principles. In Malaysia, the Philippines (for companies wishing to consolidate), and Singapore, ownership of more than 50 percent of the equity capital of an investee company is a condition for preparing consolidated financial statements. This criterion is employed by only a handful of companies in Indonesia and Thailand where consolidated statements are not mandated. Consolidation is also required in Malaysia and Singapore when an investor has effective control of an investee even though ownership is less than 50 percent. Investment in unconsolidated subsidiaries is carried on an equity basis by a majority of companies in Malaysia with approximately half of the companies in Singapore also adopting this practice. The other 50 percent of Singapore companies carry these investments at

cost with separate disclosure of the parent company's equity in related net assets. Companies in Indonesia and the Philippines also subscribe to this practice.

In accounting for enterprise assets, inventories are carried exclusively at cost in Indonesia and Malaysia while the lower of cost or market rule is generally accepted in the other three ASEAN countries. Indonesia stands alone in valuing long-term receivables at their discounted present values and recognizing imputed interest income thereon. Unlike Malaysia and Singapore, fixed asset depreciation methods for financial reporting purposes in Indonesia, the Philippines, and Thailand conform strictly to the requirements of tax law. Moreover, companies in the Philippines and Thailand do not customarily consider estimated salvage value in calculating periodic depreciation charges.

Interestingly, accounting responses to inflation are not entirely new to ASEAN as revaluation of fixed assets in excess of original cost is permitted in Malaysia, Singapore, and the Philippines. For example, special Bulletin No. 2.71, issued in November 1971 by the Philippine Institute of CPAs, recommends that companies revalue their assets using appraisal values whenever price levels, as measured by a consumer price index, increase by at least 25 percent since the last revaluation.[6] In cases where assets have been revalued, all three countries require that the basis of revaluation be disclosed and an owner's equity account credited for the amount of the write-up. Malaysia and Singapore require that depreciation expense for financial reporting purposes be based on the revalued amounts. Although the Philippine Institute also encourages such treatment, few companies follow this prescription, as depreciation on revalued assets is not yet recognized by the Philippine tax authorities.

With regard to liabilities, discount on bonds payable is usually amortized over the term of the outstanding obligation in the Philippines, Singapore, and Thailand, whereas it is written off in its entirety in the year in which it occurs in Malaysia. Long-term lease payments are recorded as periodic rental charges in the Philippines and Singapore, whereas they are capitalized in Indonesia, Malaysia, and Thailand when the substance of the lease arrangement transfers the usual risks and rewards of ownership from the lessor to the lesee. While deferred tax accounting is generally accepted in Malaysia and Singapore, this is not the case in the Philippines and Thailand. In Indonesia, tax

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[6] Philippine Institute of Certified Public Accountants, *Generally Accepted Accounting Principles: Codification of Accounting Principles Bulletins as of December 1977* (Manila, Philippines: PICPA, 1978), pp. 135, 143.

deferrals owing to timing differences are generally disclosed in footnotes to the financial statements.

Accounting for owners' equity in ASEAN also offers some interesting contrasts. The use of owners' equity reserves to transfer income between reporting periods is actually required in Indonesia and Malaysia. Revaluation reserves created following the write-up of fixed assets, mentioned earlier, are not only available for stock dividends in both Malaysia and Singapore but also for cash dividends in Malaysia!

Turning now to items of income, while sales and cost of goods sold are generally disclosed in four of the five ASEAN countries, one is hard pressed to find such disclosures in the income statements of Singapore companies. And, while earnings per share figures are disclosed in Malaysia, the Philippines, and Thailand, only a minority of companies do so in Indonesia and Singapore.

Owing to the fact that most countries in ASEAN are still in the early stages of their industrial development, foreign direct investment activities by ASEAN companies are not extensive. This no doubt accounts for the accounting emphasis on foreign-currency transactions as opposed to the translation of foreign-currency financial statements. In this regard, translation losses arising on foreign-currency liabilities incurred in relation to the import of inventories are capitalized as part of their cost if the corresponding items are unsold when the translation loss occurs.[7] This "single transaction" perspective is followed in Indonesia, Malaysia, and the Philippines. Similarly, the cost of fixed assets is also increased by any translation loss arising on foreign-currency debt incurred for the purchase of the asset, subject to a realization test. About one-half of the companies in Thailand also subscribe to this treatment. Translation gains and losses on all other unsettled transactions are generally taken to income in the period in which they take place. Malaysia is reportedly the only exception here.

As a final contrast, consider the funds statement. A statement of changes in financial position is included in the general purpose financial statements in only three of the five ASEAN countries — Indonesia, Malaysia, and the Philippines. In the former two countries, attention is directed primarily to changes in cash or its equivalent. The Philippine Institute of CPAs, in contrast, adopts a broader view and recommends that companies disclose all important aspects of financing and investing activities regardless of whether cash or other documents of working capital are directly affected.

[7] This procedure is generally subject to a lower of cost or market test.

ORGANIZATIONAL EFFORTS TOWARD REGIONAL HARMONIZATION

Cognizant of the need for a formal structure to consolidate harmonization efforts in the ASEAN region, the representatives of the various ASEAN accounting organizations held a series of organizational meetings beginning in 1976. The result was the formation of the ASEAN Federation of Accountants (AFA) on March 12, 1977, in Bangkok, Thailand. The major objectives of the Federation as stated in its constitution are as follows:

> ... to provide an organization for the ASEAN accountants for the further advancement of the status of the profession in the region with the view to establishing an ASEAN philosophy on the accounting profession, ... to establish a medium for closer relations, regional cooperation, and assistance among ASEAN accountants, and ... to work in cooperation with ASEAN business regional groupings whose economic development efforts may be complemented by ASEAN accountants.[8]

Professional accounting organizations comprising AFA are Ikatan Akuntan Indonesia, the Malaysian Association of Certified Public Accountants, the Philippine Institute of Certified Public Accountants, the Singapore Society of Accountants, and the Institute of Certified Accountants and Auditors of Thailand. The Federation is governed by a council composed of one representative from each ASEAN country. Eugenio R. Reyes, past president of the Philippine Institute of Certified Public Accountants and a partner of SGV & Co. and Tan Hee Chia, past vice president of the Singapore Society of Accountants and group chief accountant of Sime Darby Holdings, Limited, are currently serving as president and vice president, respectively, of the Federation for 1978-79. The ASEAN Federation of Accountants has been formally recognized by the ASEAN Council of Foreign Ministries and represents a significant attempt by the private sector to complement the efforts of the ASEAN governments in furthering the economic development of the region.[9]

AFA has a permanent secretariat in Manila and has already undertaken several programs of professional activity. At the present time, AFA has four standing committees: Accounting Principles and Standards (chaired by the Philippines), Auditing Principles and Standards (Indonesia), Education (Thailand), and Professional Development

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[8] From a conference program entitled *First AFA Conference and Thirty-second PICPA National Convention* (Manila, Philippines: ASEAN Federation of Accountants and Philippine Institute of Certified Public Accountants, November 22-25), p. 17.

[9] "AFA Is Affiliated with ASEAN," *AFA Newsletter* (September 1978), p. 1.

(Singapore). Most notable to date has been the work of the Accounting Principles and Standards Committee whose charge is to promulgate accounting standards applicable to conditions in the ASEAN region. The nature and scope of these standards and their authority are discussed in AFA's *Exposure Draft 1,* "Introduction to ASEAN Accounting Standards." This exposure draft, reproduced in the appendix to this paper, describes promulgation procedures similar to those followed by the International Accounting Standards Committee. *Exposure Draft 2,* "Fundamental Accounting Principles" (also appended), suggests the following as AFA's approach to regional harmonization. As a first step, the Federation has decided to formalize those accounting principles and practices common to all countries in the region. Attention will subsequently turn to an analysis of divergent accounting principles with the aim of reconciling such differences.

A recent survey conducted by AFA's Committee on Accounting Principles and Standards has identified accounting and reporting similarities among all ASEAN member countries in at least the following areas:[10]

(1) *Fundamental concepts* — The following fundamental accounting concepts are adhered to in all member countries. Accordingly, disclosure of departures from such concepts is necessary.

(a) going concern
(b) consistency
(c) accrual
(d) prudence
(e) realization

(2) *Materiality* — The relative materiality of items governs their disclosure in financial statements.

(3) *Profit and loss* — Net income for the period is clearly designated in one amount.

(4) *Accounting change* — A change in an accounting estimate is accounted for prospectively and financial information concurrently presented in respect to prior years is not restated.

(5) *Extraordinary items* — Extraordinary items are "required" to be shown separately from ordinary income and to be included in net income for the period.

(6) *Income taxes* — Provision for income taxes on the current period's profit is shown separately before determining net income.

(7) *Cost of sales* — Cost of sales and expenses are appropriately

[10] Alindada and Casino, "Harmonization," pp. 46-47.

matched against sales and revenues and proper cutoff for related items is observed.

(8) *Depreciation* — Charges to income are made in a systematic and rational manner for depreciation of all types of depreciable assets.

Exposure Draft 2, to be issued as *ASEAN Accounting Standard No. 1* upon approval by AFA's governing council, represents a codification of the foregoing concepts together with their specific applications.

AFA AND IASC

While the prospects for ASEAN accounting cooperation and harmony seem bright indeed, one may rightfully question the appropriateness of this endeavor in light of IASC efforts to establish and secure the adoption of more global accounting norms. Specifically, will AFA's regional efforts prove to be redundant or perhaps even work at cross purposes with those of the IASC? Probably not. Although accounting may be classified as a profession, an occupation, or even an intellectual discipline in its own right, it is above all a service function. As such, accounting must respond to the changing needs of a society (or societies) and conform to the social, economic, and legal-political mores of its environment. If we accept the proposition that accounting environments around the world are not the same, then accounting will justifiably differ geographically. In a similar vein, accounting standards issued by IASC may not always apply to the ASEAN context. As Choi and Mueller have observed,

> ... international standards, as they are slowly emerging through the efforts of the International Accounting Standards Committee (IASC) and the influence of capital markets as well as other international financial institutions and organizations, are really directed at the large multinational enterprises rather than at the local small-to-medium size closely-held companies.[11]

As an example, IASC now encourages consolidation of the accounts of subsidiaries owned or controlled by a parent company. This practice makes good sense for companies whose shares are widely held. This condition, however, is not the general case in ASEAN. Similarly, IASC's 20 percent ownership test as a condition for use of the equity method of accounting for nonconsolidated subsidiaries makes little sense in ASEAN countries where the stock of related companies is often owned by a few families.

AFA's efforts, therefore, will no doubt prove to be complementary

[11] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 21-22.

to those of IASC rather than competitive. An important function of AFA will be to buffer individual ASEAN countries against the wholesale adoption of international accounting pronouncements that may not be suitable to local circumstances. More importantly, active participation in the work of IASC and constructive reaction to proposed IASC dicta would enable AFA to sensitize the committee to the views and concerns of the less industrialized world.

AFA AND CAPA

What, then, are the implications of AFA for other international accounting organizations in the Pacific such as the Confederation of Asian and Pacific Accountants (CAPA)? While one can only speculate in this regard, an examination of CAPA's membership by country provides some possible clues. At the present time, CAPA's membership consists of twenty-eight professional accounting organizations from twenty-one countries in Asia and the Pacific. The sheer size of such an organization probably does little to facilitate a spirit of togetherness and congeniality among representatives of each of the member organizations. Coordinating the professional affairs of such a regional venture, furthermore, would seem ominous if not a "mission impossible." National membership in CAPA also runs the gamut from highly industrialized countries such as the United States and Japan to developing economies such as India and Sri Lanka. In an organization of such size and contrasts, there is the omnipresent danger of some members being "lost in the shuffle." Under such conditions, progress in achieving regional cooperation and a coordinated regional accounting profession would be slow. When viewed in this context, AFA constitutes a natural evolution or "partitioning" of a regional confederation that is perhaps too large and varied in its makeup to be fully responsive to the needs of all of its *national* contingents.

With a new regional organization of its own, will the ASEAN countries now withdraw from CAPA? One would hope not as the increasing interdependence of nations through trade and expanded investment flows together with the pervasive influence of multinational enterprises will heighten rather than lessen the need for regional cooperation in the Pacific. Accordingly, dual membership in both AFA and CAPA would seem both necessary and desirable. Should the ASEAN five withdraw from CAPA and pursue an independent mode of operation, the International Federation of Accountants, whose objective, among others, is to encourage and promote the development of re-

gional organization, will have a very significant role to play in coordinating the activities of these two Pacific Basin accounting federations.

CONCLUSION

The ASEAN Federation of Accountants promises to be a constructive force in the international accounting standards movement. As a regional accounting organization, formally recognized by each of the ASEAN governments, AFA will play a leadership role in the quest for harmonized accounting and reporting standards in Southeast Asia. While AFA will undoubtedly benefit from the experiences of the industrialized countries in the promulgation of accounting standards, it will also serve as a vehicle for tailoring international standards to the ASEAN framework. Coordination of harmonization efforts in ASEAN and active participation in the formulation of international accounting standards will enable AFA to help buffer the mammoth IASC influence on its member countries. In so doing, AFA will foster a greater sense of confidence within ASEAN and a sense of not being dominated by what is often perceived as an extension of the former "mother countries." If nothing else, AFA should produce higher visibility and social and professional status for independent accountants in Asia. In all of these areas, let us wish them well.

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APPENDIX: EXPOSURE DRAFTS: ED 1 — INTRODUCTION TO ASEAN ACCOUNTING STANDARDS, AND ED 2 — ASEAN ACCOUNTING STANDARD NO. 1: FUNDAMENTAL ACCOUNTING PRINCIPLES

Committee on Accounting Principles and Standards, ASEAN Federation of Accountants

Foreword

The Committee on Accounting Principles and Standards of the ASEAN Federation of Accountants is responsible, among others, for undertaking programs for the continued development of accounting principles and standards that are applicable to conditions in the ASEAN region. Initially, the Committee prepared and circularized a two-part questionnaire/survey of accounting principles and practices in the ASEAN member countries. It has compiled the replies to the questionnaire and has analyzed the results of the survey.

The results of the survey highlighted points of agreements and disagreements in the ASEAN member countries on the principles and practices enumerated in the questionnaire. As a first step in harmonizing principles and practices in the region, the Committee decided to formalize those principles and practices in the questionnaire whose applications are deemed substantially similar. Accordingly, the Committee proposes the promulgation by the ASEAN FEDERATION OF ACCOUNTANTS of those fundamental accounting principles and reporting practices for ASEAN.

The accompanying exposure draft (ED 2) of an ASEAN Accounting Standard (AAS) on fundamental accounting principles prepared by the Committee on Accounting Principles and Standards is issued for comment only and does not necessarily represent the views of the Committee. The exposure draft is based on the questionnaire/survey replies which primarily represent the positions and views of the AFA member organizations that prepared the replies. Since the fundamental principles and practices set forth in the exposure draft are limited to those that were enumerated in the questionnaire/survey, the exposure draft does not purport to present a complete listing of all principles and practices that are similar in the ASEAN region. The principles and practices are necessarily described in general terms and therefore do not indicate variations that may be relevant to a particular country.

The contents of the exposure draft should be studied carefully in the light of existing local regulatory and professional requirements and appropriate commentaries submitted so that the necessary modifications, revisions or refinements can be incorporated. Comments should be submitted in writing not later than January 31, 1979 to the address below:

Committee on Accounting Principles and Standards
ASEAN Federation of Accountants
c/o Philippine Institute of Certified Public Accountants
P.O. Box 1440
Manila, Philippines

If no major comments are received as at January 31, 1979, the draft will be finalized in its present form.

Support to this initial promulgation of the accounting principles by AFA is proposed to be along the following approach:

1. Following the approval by the AFA Council of the final draft and its issuance as ASEAN Accounting Standards No. 1, member organizations will publish the Standard (which is intended to be consistent with the requirements in the ASEAN region). The publication should contain a statement that existing local regulatory or professional requirements are consistent with the Standard and, therefore, compliance with local requirements will automatically assure compliance with such Standard.
2. The member organizations will exert its [*sic*] best efforts to include in their professional requirements a statement to the effect that if an ASEAN Accounting Standard is consistent with existing local requirements, compliance with local requirements will, in itself, automatically assure compliance with AFA pronouncements.

The proposed approach for support to future promulgation of standards by AFA is contained in a separate exposure draft (ED 1)-Introduction to ASEAN Accounting Standards.

COMMITTEE ON ACCOUNTING PRINCIPLES AND STANDARDS
1978

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ED 1 — Exposure Draft — Introduction to ASEAN Accounting Standards

On March 11, 1977, the ASEAN Federation of Accountants (AFA) was organized by the national organizations in the ASEAN region to support and complement the joint efforts of the ASEAN governments and in the ASEAN business and industry to "accelerate the economic growth, social progress and cultural development in the region." Because of the varying degrees of divergence in background and development of accountancy in the region, AFA aims, among others, to enhance the continuous development of the accounting profession in the region.

The Committee on Accounting Principles and Standards is the standing committee of AFA responsible for the following:

1. Undertaking programs for the continued development of accounting principles which are applicable to conditions in the ASEAN region.
2. Providing assistance and technical support to member organizations on matters related to the practice of accountancy.
3. Submitting recommendations on accounting principles and standards to the AFA Council for approval.

As a result of the activities of the Committee to enhance regional standards and practices, an exposure draft of a proposed ASEAN Accounting Standard (AAS) on a particular subject may be prepared for approval by the AFA Council. If approved by the Council, the exposure draft will be

issued to all AFA member organizations. Adequate time will be allowed so that proper consideration is given to the draft by the member organizations.

The Committee will study the comments and suggestions received as a result of the exposure and will revise or modify the draft as necessary. If the revised draft is approved by the Council, it will be issued as an ASEAN Accounting Standard and will be effective on the date specified therein.

Support to ASEAN Accounting Standards

Regional principles or standards that may be adopted by AFA are intended to enhance the meaningfulness, comparability, and understandability of financial statement prepared within the region. If an AFA standard is consistent with existing local regulatory or professional requirements, compliance with such requirements will automatically ensure compliance with the Standard. If an ASEAN Accounting Standard conflicts with local requirements, it will not override the national/local regulations/requirements.

Support to the AFA standards should preferably be along the following approach:

1. After issuance by AFA of an ASEAN Accounting Standard, the member organizations will publish such Standard, with appropriate comments as indicated in the following sections.
2. If the ASEAN Accounting Standard is consistent with the local regulatory or professional requirement, the publication should contain a statement that:
   a) existing local regulatory or professional requirements are consistent with the Standard, and
   b) compliance with local requirements automatically ensures compliance with the Standard.
3. If the ASEAN Accounting Standard includes any provisions which either impose additional requirements or conflict with local regulatory or professional requirements, the publication should indicate the steps intended to be taken by the member organization to implement the Standard. The national organization should then exert its best efforts to align local requirements with the Standard. If this is not possible, the national organization should identify those provisions which cannot be so aligned. There will then be non-compliance with these provisions. The national organization should then work for the disclosure of non-compliance with ASEAN standards in the financial statements or in the audit report.
4. The ASEAN Accounting Standard should be given as much publicity as possible in the business community, business schools and the business sector of the government in the ASEAN member countries to enhance their impact on accounting practice in the region.

Conclusion:

It is expected that support to the ASEAN Accounting Standards or disclosure of the extent to which they have not been followed will gradually improve the presentation of financial statements in the region and will eventually contribute to a proper understanding of financial statements emanating from the region.

ED 2 — Exposure Draft — ASEAN Accounting Standards No. 1, Fundamental Accounting Principles

This Standard deals with the fundamental principles and reporting practice that should underlie the preparation and presentation of financial statement in the ASEAN region. Financial statements for this purpose is [*sic*] defined to include a balance sheet, income statement or profit and loss account, notes and other statements which are identified as part of the financial statements.

Accounting principles and reporting practices generally differ in varying degrees among the ASEAN member nations. Similarities, however, exist with respect to certain general concepts and basic disclosure practices. To promote ASEAN wide acceptance of these concepts of practices, a need arises to formalize and codify them within the region before any attempt is made to harmonize the divergent principles and practices. Following are fundamental accounting principles recognized by the ASEAN Federation of Accountants.

Fundamental Principles

1. Going Concern

   Unless stated otherwise, financial statements should be drawn up on the going concern concept, i.e. that the business will continue in operation indefinitely. It is assumed that the business will continue operating for a period of time sufficiently to carry out its contemplated objectives, plans, contracts and commitments.

2. Consistency
   a. It is assumed that accounting methods and practices are consistent from one period to another.
   b. Where accounting principles and methods have not been consistently applied in the determination of results of operations as between one period and another the effect of the change should be disclosed.
   c. A change in accounting principles which is inseparable from estimates should be accounted for prospectively and financial information currently presented in respect of prior years should not be restated.
   d. A change in accounting estimate should be accounted for prospectively and financial information currently presented in respect of prior years should not be restated.

3. Accrual

   Revenues and costs should be accrued, that is, recognized as they are earned or incurred (not when money is received or paid) and recorded in the financial statements of the periods to which they relate.

4. Prudence

   Uncertainties necessarily surround many transactions. This should be recognized by exercising prudence in preparing financial statements.

5. Realization

   Profits on transactions should not be taken up until cash is received or collection is assured.

6. Matching

   Cost of sales and expenses should be appropriately matched against sales and revenues. It follows that there should be proper cut-off ac-

counting for inventories, liabilities and costs at the beginning and end of each period.

7. Materiality

   The relative materiality of items should govern their disclosure in financial statements.

8. Historical Cost
   a. Assets, liabilities, income and expenses should be recorded in the financial statements on the basis of historical cost which should not be restated to reflect changes in the purchasing power of the currency unit at a subsequent balance sheet date.
   b. Any variations from the historical cost concept should be disclosed.

Disclosure

1. Adherence to Fundamental Principles

   It is not necessary to disclose in financial statements adherence to the following fundamental accounting principles
   a. going concern
   b. consistency
   c. accrual
   d. prudence

   If any of these principle [*sic*] is not followed, the departure should be disdisclosed.
2. Accounting principles or methods chosen from two or more available to meet a given circumstance should be disclosed in the financial statements.

Balance Sheet Principles

1. Receivables
   a. Receivables should be reduced by allowances (provisions) to cover possible collection costs or losses in respect of unspecified accounts, in addition to specific accounts which on the basis of past experience and general business knowledge may prove uncollectible.
   b. Receivables from the following should be shown separately:
      (1) affiliated companies
      (2) officers
      (3) directors
2. Inventories
   a. Inventories should be carried at cost or market whichever is lower.
   b. The basis for carrying inventories should be disclosed.
   c. The basis of determining the cost of inventories (FIFO, average, LIFO, etc.) should be disclosed.
   d. Cost of inventories should include direct material and labor and all variable and fixed manufacturing overhead calculated at a level of normal capacity.
   e. The definition of "market" need not be consistent for the entire inventory but may change according to the type of inventory item. Thus raw materials at "market" means replacement price; work-in-progress and finished goods at "market" means net realizable value. Net realiz-

able value is defined as estimated selling price less reasonably predictable costs of completion and disposal and an approximately normal profit margin.

f. A breakdown of inventories by type (finished goods, work-in-progress, raw materials, etc.) should be disclosed.

3. Investments
   a. Investments in marketable securities classified as current assets should be carried at the lower of cost or market value.
   b. Investments classified as long-term which are carried at cost should be written down by a provision for any impairment in value.
   c. Where the market value of quoted investments is different from their book amount, the market value should be disclosed.
4. Fixed Assets and Depreciation
   a. Fixed assets
      (1) The basis on which fixed assets are stated should be disclosed.
      (2) Land should be shown separately from other fixed assets.
      (3) Costs of construction of fixed assets should include direct cost of labor and material plus an appropriate portion of overhead.
      (4) Costs of construction of fixed assets may include interests on money borrowed to finance the construction until substantial completion.
      (5) Fully depreciated assets still in service should not be removed from fixed asset and accumulated depreciation accounts. Items no longer in service should be removed from the accounts.
      (6) The amount of firm contracts for future capital expenditure, not accrued at the date of the financial statements, should be disclosed.
   b. Depreciation
      (1) Charges to income should be made in a systematic and rational manner for depreciation of all types of depreciable assets.
      (2) Charges to income for depreciation based on the normal life of an asset should be adjusted for earlier economic obsolescence.
      (3) The following should be disclosed:
         (a) the methods used in computing depreciation of major classes
         (b) depreciation charges to income
         (c) amount of accumulated depreciation.
5. Liabilities
   a. All known liabilities should be recorded regardless of whether their definite amount is determinable.
   b. Contingent liabilities of importance should be disclosed.
   c. The following should be disclosed separately:
      (1) accounts and notes payable to affiliates
      (2) accounts and notes payable to officers and directors
   d. Where a liability is secured on the company's assets, this fact should be stated.
6. Long-Term Debt

   The amount outstanding, interest rate and term of the debt should be disclosed.

7. Capital (Stockholders' Equity)
   a. The rights and preferences to dividends and to principal should be disclosed.
   b. The status of stock options outstanding and changes occurring during the period should be disclosed.
   c. Any share of a company's own stock reacquired should be recorded at cost and shown as a reduction of stockholders' equity.
   d. Where options or warrants to subscribe for shares in the company are outstanding, the period during which the option is exercisable and the price to be paid for the shares should be disclosed.
   e. Profits and losses arising from transactions in the company's own capital stock should not pass through income.
   f. Capital gains (other than those resulting from transactions in the company's shares) should be taken into income.
   g. Reserves
      (1) Reserves should not be used to absorb charges which would otherwise be charges against income of current or future years.
      (2) General reserves should not be set up by charges to income.
      (3) The movements in reserves during the period should be disclosed.
   h. Retained earnings
      (1) Restrictions on distributions of retained earnings (because of loan agreements, trust deeds or other legal restrictions) should be disclosed.
      (2) Cumulative dividends in arrears should be disclosed.
8. Other Balance Sheet Items
   a. Intangible assets — intangible assets should be amortized over the period estimated to be benefited.
   b. Subsequent events — Events or transactions occurring between the date of the balance sheet and the date of the auditors' report which may have a material effect on the financial position or results of operations of the business should be disclosed or reflected in the financial statements, as appropriate.
   c. Pledged assets — The nature and extent of hypothecated or pledged assets should be disclosed.
   d. Long-term contracts — Provision should be made for estimated losses on completion when expectation of loss is discovered.
   e. Purchase contracts — Provision should be made for anticipated losses on unexpired purchase contracts.
   f. Lease, lease purchase and instalment transactions — The following should be disclosed:
      (1) material rental charges for the year under long-term leases
      (2) commitments — amounts and periods — for future years under leases and hire purchase contracts.
      (3) the method of accounting for leases, lease purchase and instalment transactions.

Income Statement Principles

1. Sales and Revenue
   a. Sales, revenue and income should not be anticipated or omitted. Accordingly, there must be proper cut-off accounting at the beginning and end of each period.
   b. Sales should be accounted for at the time of delivery rather than at the time of order.
   c. Sales and other revenue for the period should be disclosed.
   d. Unrealized earnings on sales of real estate should be shown as deferred income unless collection is assured.
2. Cost of Sales
   Cost of sales for the period should be disclosed.
3. Employee Compensation and Pension
   Pension costs should be provided for currently over the term of employment.
4. Insurance
   a. Uninsured losses should be charged against income as they occur.
   b. Where a self-insurance account is operated, the financial statements should disclose the accounting method adopted.
5. Research and Development Costs
   Development costs may be deferred and amortized on an appropriate basis when the development work and related expenditure are clearly identifiable and there are grounds for accepting that such costs will be covered by future revenue.
6. Income Taxes
   a. Provision for income taxes on the current period's profits should be shown separately before determining net income.
   b. Income taxes should be charged against results of operations on the basis of current income rather than on the basis of when paid.
7. Extraordinary Items
   a. Extraordinary gains or losses, which are those resulting from events or transactions whose recurrence is not a regular feature of the business, should be shown separately from ordinary income and included in net income for the period.
   b. Amounts which enter into the determination of income but which are not extraordinary items should be disclosed when their effects on the results of a period is exceptional.
8. Profit or Loss
   Net income for the period should be clearly designated in one amount.

Foreign Currency Transactions

1. The basis of translating foreign currencies should be disclosed.
2. Importation of inventories
   a. Exchange losses arising on foreign currency liabilities incurred for importations of items of inventories may be added to the cost of inven-

tories if the corresponding items are unsold when the exchange losses arise, subject to a lower of cost and market test.

b. Exchange losses arising on foreign currency liabilities incurred for importations of items of inventories should be charged to income as part of cost of goods sold if the items have been sold in the period in which the exchange losses arise.

3. Purchase of fixed assets

The cost of fixed assets may be increased by exchange losses arising on foreign currency liabilities incurred for the purchase of the assets, subject to a realization test.

4. Unsettled transactions

Exchange gains or losses on unsettled transactions may be credited to or charged against income in the period in which they arise, no attempt being made to match them with specific incomplete transactions.

Comparative Figures

Comparative figures for the previous year should preferably be shown in the financial statements.

Internal Performance Evaluation of Multinational Enterprise Operations

HELEN G. MORSICATO and LEE H. RADEBAUGH*

The development of a set of uniform international accounting standards requires substantial interaction among countries and between the public and private sector both nationally and internationally. Numerous efforts have been made to standardize the financial reporting practices of countries worldwide and the basic underlying objectives, standards, and practices that are used to generate financial statements. The most recent of these efforts has involved the International Accounting Standards Committee (IASC) and the International Federation of Accountants (IFAC).[1]

Most harmonization efforts have focused on the external users of financial statements — primarily shareholders, prospective investors, and creditors. This idea was emphasized in the recent Statement of Financial Accounting Concepts No. 1 issued by the Financial Accounting Standards Board (FASB). However, the FASB also recognizes that "the same accounting system normally accumulates, processes and provides the information whether it is called managerial

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[1] For an excellent summary of the organization and functions of IASC and IFAC, see Joseph P. Cummings and Michael N. Chetkovich, "World Accounting Enters a New Era," *Journal of Accounting* (April 1978): 52-61.

or financial or internal or external."[2] Obviously, management is in a good position to contribute substantially to the setting of international accounting standards.

In addition, IFAC has demonstrated real interest in upgrading the quality of information used by management for decision making. One aspect of the twelve-point program developed by IFAC is to "evaluate, develop and report on financial management and other management accounting techniques and procedures."[3] Thus it makes good sense to focus on some of the management accounting dimensions of the multinational enterprise (MNE). One such dimension is the use of financial information to evaluate the performance of foreign subsidiaries and their managers.

Evaluating the performance of foreign manufacturing subsidiaries of multinational enterprises engenders many problems. First, there is a paucity of adequate performance evaluation systems for appraising subsidiaries and their managers. Second, there is the issue of translating the foreign-currency financial information to parent currency. This paper focuses on the *interaction* of financial statement translation and performance evaluation of foreign operations, primarily from the viewpoint of a U.S.-based MNE, although an extension of the ideas could be made to MNEs domiciled in countries other than the United States.

The information used in this paper is part of a much larger study focusing on the use of U.S. dollar and local-currency information by international division executives (IDEs) in evaluating the performance of their foreign subsidiaries and managers.[4] Specifically, the paper will (1) document the performance evaluation methods currently used by the IDEs; (2) examine the use of U.S. dollar and/or local-currency financial information in performance evaluation; (3) identify and discuss the rationale of IDEs in utilizing particular performance evaluation methods and rejecting alternative methods; and (4) identify and discuss the reasons given by the IDEs for using U.S. dollar and/or local-currency financial information in performance evaluation.

PERFORMANCE EVALUATION OF THE MULTINATIONAL ENTERPRISE

Performance evaluation is a critical issue in international accounting.

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[2] Official Releases, "Statement of Financial Accounting Concepts, No. 1 — Objectives of Financial Reporting by Business Enterprises," *Journal of Accountancy* (February 1979): 94.

[3] Cummings and Chetkovich, "World Accounting," p. 52.

[4] Helen Gernon Morsicato, "An Investigation of the Interaction of Financial Statement Translation and Multinational Enterprise Performance Evaluation" (Ph.D. dissertation, The Pennsylvania State University, 1978).

With the development of the MNE came the extension of the accounting function to record and report intercountry operations. Performance evaluation of operations in an international environment is a problem area that has evolved with this extension of the accounting function.

The importance of adequate performance evaluation techniques for appraising international operations assumes an added perspective when one considers that international resource allocation decisions are based upon these evaluations.[5] An extension of this argument is to say that performance evaluation techniques employed by an MNE could have an international economic impact.

When one is operating in the realm of the multinational enterprise, accounting functions as an important formal source of information available to management. The headquarter's management needs this information to evaluate the performance of the multinational subsidiaries and the multinational subsidiary managers.

Accounting data can provide some of the important dimensions of manager and subsidiary performance, but Hopwood suggests that accountants face many major problems in designing information systems for this purpose.[6] First, neither accountants nor managers have developed comprehensive measures and standards of performance. Therefore, not all of the relevant dimensions of performance are included in the accounting reports. Second, "even considering the economic aspects of performance, an organization's economic cost function is rarely known with precision and an accounting system can only attempt to approximately represent its complexity." Third, the accounting data may be an inadequate reflection of managerial performance. Accounting reports are primarily concerned with representing the outcome of the subsidiary's operations. Managerial performance is concerned with the efficiency of the process resulting in the final outcome. There may be factors that affect the reported efficiency of the process but which are uncontrollable by the manager. The isolation of these factors is a difficult task when one is concerned with domestic operations. It becomes even more difficult when one is involved with multinational operations. Fourth, accounting reports emphasize short-term performance indices while managerial performance evaluation may be more concerned with long-term considerations. The cost of designing a system that provides accurate and relevant data is also a constraint that must be considered.

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[5] Anthony G. Hopwood, "Empirical Study of the Role of Accounting Data in Performance Evaluation," *Empirical Research in Accounting* (1972): 157.
[6] Ibid., p. 157.

Accountants attempt to produce general-purpose reports to serve the many varied users of this information. Ideally, it would be better for users if accountants could provide a unique set of data for each of the purposes it is intended to serve. By attempting to satisfy so many purposes and users, the general purpose reports may fail to satisfy perfectly the requirements for any single purpose, for instance, the appraisal of subsidiary and managerial performance.[7]

It is frequently possible to improve an existing performance evaluation system, but it is unlikely that an ideal accounting performance measurement system will be developed. The present research was undertaken to obtain more detailed knowledge of why certain accounting data are used by the multinational enterprises in evaluating the performances of their multinational subsidiaries and managers. More specifically, the paper focuses on whether translated and untranslated accounting data are used in a variety of reports by the multinational headquarter's management in the evaluation of the multinational subsidiary, why a particular choice was made, and the factors headquarters might consider in using financial data to evaluate performance.

FINANCIAL MEASURES USED IN PERFORMANCE EVALUATION BY MNEs — RESULTS OF PRIOR STUDIES

Several studies concerned with evaluation and control techniques of the MNE have been conducted. This section presents a summary of the results of each study.

The Mauriel Study

Mauriel examined the nature, scope, and effectiveness of multinational performance evaluation and control systems. He found that the fifteen giant multinational companies (sales of over $5 billion) that he studied placed heavy emphasis on financial controls. They also required their subsidiaries to use standard domestic budgeting and financial planning techniques. These corporations used the profit or investment center concept with increasing emphasis on return on investment as a performance measure. Mauriel also found that currency differences require a careful approach to interpreting the meaning of the overseas division's balance sheet and earnings statement. In most instances, the foreign manager was given little control over many decisions made by the parent company that would ultimately affect his operating results.

[7] Ibid.

Mauriel also observed a lack of understanding of and concern for the impact of currency fluctuations on performance evaluations.[8]

The McInnes Study

McInnes' research entailed a survey of thirty moderately sized multinationals (sales in the $100 to $300 million range). This study focused on the design of financial reporting systems between corporate headquarters and foreign affiliates, and the use by corporate executives of reported financial data in the evaluation of its foreign operations.[9] The research findings strongly supported the notion that there is very little difference in the design and implementation of financial reporting systems for foreign and domestic operations.

McInnes also found that 17 percent of the corporations required their subsidiaries to report only local-currency information; U.S. dollar information was required from 30 percent; both U.S. dollar and local-currency reports were required from 50 percent; and for 3 percent of the firms, the requirement depended upon the country involved.

The Financial Executives Research Foundation Study

The Financial Executives Research Foundation sponsored a study on the financial control of multinational operations which was designed to codify these methods of financial control currently used by the multinational companies. The study carefully reviewed the procedures used by thirty-four multinational corporations. Each corporation had members in the Financial Executives Institute, and each published separate figures in its annual reports for at least some aspect of its foreign operations. As many as 94 percent of the companies held their subsidiaries responsible for profit performance and used this as a measure of performance evaluation.[10] Profit as compared to a profit budget was the principal measure of profitability with return on investment (ROI) mentioned next. Another conclusion was that an MNE control system should measure how well the foreign subsidiary manager has managed his operations in light of environmental peculiarities and foreign-currency fluctuations.[11]

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[8] John J. Mauriel, "Evaluation and Control of Overseas Operations," *Management Accounting* (March 1969): 36-37.
[9] J. M. McInnes, "Financial Control Systems for Multinational Operations: An Empirical Investigation," *Journal of International Business Studies* (Fall 1971): 12.
[10] Edward C. Bursk et al., *Financial Control of Multinational Operations* (New York: Financial Executives Research Association, 1971), p. 25.
[11] Ibid., p. 43.

The Robbins and Stobaugh Study

The evaluation practices used by the MNE in evaluating foreign operations were again studied by Robbins and Stobaugh in 1973. Financial executives of 39 MNEs were interviewed, and the published records of an additional 150 MNEs were studied. They found that foreign and domestic subsidiaries were evaluated on the same basis and that the basic measure of performance was a form of return on investment with budgets used for supplemental information. The corporations reported that no separation between the evaluation of the subsidiary and manager was recognized. Local-currency financial information was required by 44 percent of the firms, U.S. dollar information by 44 percent, and both types were required by 12 percent.[12]

These studies demonstrate the following: (1) there was and is now little apparent difference between the performance evaluation systems employed for domestic and foreign operations; (2) there is no consistency or uniformity when considering the issue of separating the manager's performance from that of the subsidiary; (3) most corporations use a subset of return on investment, budgeting, and comparisons when evaluating the performance of foreign operations; and (4) corporations were U.S. dollar-oriented in 1969,[13] more aware of local-currency information in 1971,[14] and split between using U.S. dollar or local-currency information in 1970[15] and 1973.[16]

METHODS

Since knowledge in the area of MNE performance evaluation is still in its formative stages, a two-phase exploratory field study was the chosen methodology for this investigation. The first phase consisted of analyzing the results of a questionnaire, and the second involved interviewing several of the participating IDEs.

The Questionnaire

The questionnaire was designed to obtain information pertaining to the performance evaluation practices and the methods of translation used by the corporations. The section on performance evaluation was developed to gather information on the U.S. dollar and/or local-

[12] Sidney M. Robbins and Robert B. Stobaugh, "The Bent Measuring Stick for Foreign Subsidiaries," *Harvard Business Review* (September-October 1973): 85.
[13] Mauriel, "Evaluation."
[14] McInnes, "Financial Control."
[15] Bursk et al., *Financial Control.*
[16] Robbins and Stobaugh, "Measuring Stick."

currency financial and comparative measures used by the corporations. This part included questions relative to the interaction of environmental peculiarities and the design of the corporation's system of internal performance evaluation of foreign operations.

Environmental peculiarities were included because multinational enterprises encounter environmental factors unique to international operations. The dominant environmental factor peculiar to all foreign operations is that of different national currencies. Unexpected currency depreciation and appreciation and internal price-level fluctuations may cause difficulty in predicting a country's exchange rate. Varying rates of interest, multiple systems of taxation, and the influence of cultures also have implications for those who design, administer, and use performance evaluation systems.

Subjects

The questionnaire was mailed to 293 U.S.-based corporations with manufacturing subsidiaries abroad which produce basic chemicals or manufactured products by predominantly chemical processes. The chemical industry was selected for the following reasons: (1) chemical manufacturing corporations compete worldwide; (2) there is a great variation in their commitments to foreign operations; and (3) the availability, proximity, and willingness of chemical corporations to participate were substantial and necessary. A single industry was examined to facilitate the isolation of variables peculiar to a group of corporations having a common characteristic. No prior study has focused on the practices of a specific industry. Although there is no clear evidence to suggest that MNEs operating in different industries would use local-currency and U.S. dollar financial information differently, this hypothesis can be examined in future studies.

After the mailing of the initial and follow-up questionnaires, the list of eligible corporations was reduced from 293 to 182. Of that number, 70 (38.5 percent) completed and returned the questionnaire. Eighty-one corporations never responded to either the initial questionnaire or the follow-up, and thirty-one admitted that they were eligible to participate but had to refuse because of company policy or due to the confidentiality of the requested information. Exhibit 1 provides an analysis of the responses of the sample corporations.

Of the seventy corporations that did respond to the questionnaire, thirty-three reported annual foreign sales of less than \$100 million; twenty-two reported annual foreign sales ranging from \$100 to \$500 million; and fifteen reported annual foreign sales of over \$500 million.

Exhibit 1. Analysis of the Responses of the Sample Corporations

Number of questionnaires mailed			293
Ineligible corporations			111
Out of business		4	
Merged		3	
Responded NO		104	
Eligible corporations			182
Positive response		70	
Negative response — company policy		25	
Negative response — confidential		6	
No response		81	
Percent of positive responses to eligible corporations 70/182	38.5%		
Percent of total responses to total possible responses 205/286	71.7%		

Sixty-five corporations have subsidiaries in Europe, fourteen have subsidiaries in the Middle East, twenty have subsidiaries in Africa, thirty-six in Asia, thirty-five in Australia, fifty-five in Latin America, and fifty-five in Canada.

The Interviews

The analysis of key questions on the questionnaire provided a basis for selecting those corporations that would participate in the second phase of the field study. An attempt was made to contact corporations with opposite policies toward performance evaluation, that is, U.S. dollar-oriented versus local-currency oriented, concerned with environmental peculiarities versus insensitive to these peculiarities, and so forth. This balance enabled the researchers to acquire an in-depth explanation from IDEs with different opinions as to why certain approaches to performance evaluation were followed and alternatives not followed.

Seventeen corporations were visited personally and an additional sixteen were interviewed by telephone. The purpose of these interviews was to gain a more thorough understanding of particular responses, to highlight the most crucial and timely problems pertaining to performance evaluation, and to explore the reasoning behind established performance evaluation policies of the corporations.

RESULTS

The first part of this section focuses on several aspects of the questionnaire that deal with local-currency and U.S. dollar financial measures. The second part consists of an analysis of the results based on comments and impressions of IDEs gathered through telephone and personal interviews.

Documentation of Performance Evaluation Methods

Exhibit 2 summarizes the financial measures used as indicators of internal performance evaluation. Profit, return on investment, budget compared to actual profits, and budget compared to actual sales are the measures used most frequently after translation in U.S. dollars. Budget compared to actual profits, budget compared to actual sales, and profit are those used most frequently before translation in local currency.

It is interesting to note that the frequency of use of these measures changes depending upon whether the measure has been translated to U.S. dollars or remains in local currency. For example, the use of return on investment varies from 80.0 percent after translation to 52.9 percent before translation. There is also a fairly large difference in the

Exhibit 2. Financial Measures Used as Indicators of Internal Performance Evaluation

After translation in U.S. dollars (Percent[a])	*Before translation in local currency (Percent)*	*Financial measures*
81.4	70.0	Profit
80.0	52.9	Return on investment (assets)
78.6	72.9	Budget compared to actual profits
72.9	72.9	Budget compared to actual sales
65.7	35.7	Cash-flow potential from foreign subsidiary to U.S. operations
48.6	31.4	Return on equity
45.7	38.6	Budget compared to actual return on investment
34.3	30.0	Ratios
21.4	18.6	Residual income
12.9	11.4	Others

[a] These figures represent the percent of the total seventy corporations which report using each particular measure.

Exhibit 3. Most Frequently Used Performance Evaluation Measures as Reported in Several Studies

Financial measures in U.S. Dollars	*Studies*				
	Mauriel	*McInnes*	*FERF*[a]	*Robbins & Stobaugh*	*Morsicato*
Return on investments (assets)	√	√	√	√	√
Profit	√		√		√
Budgets		√		√	
Return on sales				√	
Budget compared to actual sales	√		√		√
Budget compared to actual profit	√		√		√
Temporal comparisons	√	√		√	√
Industry comparisons	√				

[a] Financial Executives Research Foundation.

use of cash-flow potential. However, this difference is probably due to the fact that cash-flow potential of a subsidiary in U.S. dollars is far more important to a U.S.-based corporation than the cash-flow potential in local currency. In every case, except budget compared to actual sales in which the percentages of use are both 72.9, the rate of use of the after-translation measures is higher than that for the before-translation measures.

In comparison, the Robbins and Stobaugh study showed that the two most important measures used by the firms for performance evaluation purposes were return on investment and the budget, followed by return on sales and growth on sales.[17] The McInnes study found the most frequently used measures to be return on investment, comparisons with plan, and historical comparisons.[18] Mauriel reported that the firms he studied employed budgeting, temporal and industry average comparisons, return on investment, and, to a lesser extent, sales and profit targets.[19] The study sponsored by the Financial Executives Research Foundation found that profit, return on investment, budget compared to actual profit, and budget compared to actual sales were the measures used most frequently for evaluating the performance of foreign subsidiaries and their managers.[20] (See exhibit 3.)

[17] Ibid., pp. 82-83.
[18] McInnes, "Financial Control," p. 21.
[19] Mauriel, "Evaluation," p. 36.
[20] Bursk et al., *Financial Control,* p. 43.

Exhibit 4 shows the percentages for the measures a corporation may use as a basis of comparison against the subsidiary's actual balance sheet and income statement either after or before translation. Historical data of the subsidiary, both after and before translation, are used most frequently with tabulated percentages of 65.7 and 72.9, respectively. This comparison indicates that the firms have a slight preference for local-currency information when making historical comparisons.

The data appear to indicate, however, a preference for after-translation financial statements when comparing a foreign subsidiary to domestic subsidiaries and comparing foreign subsidiaries in different countries. This is to be expected since comparisons could thus be made in a common denominator (the U.S. dollar). It is interesting to note that 71.4 percent of the corporations do not attempt to compare foreign subsidiary results with other similar manufacturing units of the corporation in the same country. This is due primarily to the relatively small foreign markets and the use of single-plant production strategies. Comparison with results of competitors is virtually impossible due to the lack of externally published data.

Exhibit 4. Measures Used as a Basis of Comparison for Internal Performance Evaluation

After translation in U.S. dollars (Percent[a])	*Before translation in local currency (Percent)*	*Does not apply (Percent)*	*Comparative measures*
14.3	21.4	71.4	Other similar manufacturing units of your corporation in the same country
48.6	25.7	31.4	Other similar manufacturing units of your corporation in different countries
54.3	30.0	25.7	Other similar manufacturing units of your corporation in the United States
65.7	72.9	2.9	Historical data of the subsidiary (i.e., prior period balance sheets and income statements)
4.3	7.1	4.3	Others

[a] These figures represent the percent of the total seventy corporations which report using each particular comparison.

The corporations were also asked whether financial statements presented in terms of U.S. dollars or local currency provide better information for the internal performance evaluation of foreign subsidiaries and managers. In response to this question, forty-six IDEs (65.7 percent) stated a preference for local-currency information and fifteen (21.4 percent) preferred dollar information. Nine IDEs (12.9 percent) commented that it is impossible to choose one or the other as better and reported that their corporations consider both when evaluating the performance of foreign operations. This response is interesting in light of the fact that a slight preference for local-currency information is exhibited only in comparing historical data of the subsidiary.

Sixty-three of the corporations (90.0 percent) reported that they use the same basic techniques to evaluate subsidiary performance as they use to evaluate manager performance. Various comments were made on this issue of separating the manager's performance from that of the subsidiary. The two most frequently mentioned techniques for accomplishing this separation were (1) to evaluate the manager strictly in his own local currency, and/or (2) to evaluate him based upon only his controllable revenues and expenses.

Sixty-three of the corporations (90.0 percent) also reported that they apply the same performance evaluation techniques domestically as they do abroad. This is consistent with the Robbins and Stobaugh study and the McInnes study. For those seven corporations (10.0 percent) which do not necessarily use identical measures at home and abroad, the differences in operating environment and organizational structure are prime considerations when evaluating worldwide performance and prevent the use of identical evaluation measures for all subsidiaries. Organizational structure is considered to be an important variable because of the effect the structure may have on the control function of the MNE. Discussion of this variable is the topic of a future paper by the authors.

All seventy IDEs responded "yes" when asked if budgets are used in the performance evaluation process. The budgets are generally prepared in local currency and then translated into U.S. dollars. Seven corporations (10.0 percent) do not translate their budgets and choose to use only the local-currency information in performance evaluation. In sixty-seven cases (95.7 percent), the budget is prepared by the foreign subsidiary manager with final approval from headquarters, while in only three cases (4.3 percent) the budget is prepared by the home office.

Information Pertaining to Performance Evaluation Gathered through the Personal and Telephone Interviews

The second phase of the data collection consisted of completing seventeen personal and sixteen telephone interviews with IDEs who had completed the original questionnaire. The purpose of these interviews was to explore particular responses more completely, thus enabling the researchers to gather additional data pertaining to performance evaluation. An in-depth explanation as to why certain approaches were followed and alternatives not followed was acquired. This section discusses and tabulates in summary form the responses to several of the questions which pertain to performance evaluation.

Each of the thirty-three IDEs was asked to rank in terms of usefulness and importance those measures used most frequently for internal performance evaluation of the foreign subsidiaries and their managers. The rankings for the first place are explained as follows: (1) ten IDEs (30.0 percent) ranked return on investment as first, (2) nine IDEs (27.0 percent) ranked budgetary information as first, (3) seven IDEs (21.0 percent) reported that the evaluation measures are considered as a package without ranks, (4) five IDEs (15.0 percent) ranked profit as first, and (5) two IDEs (6.0 percent) ranked local-currency measures as first.

Profit and return on investment in U.S. dollars are considered to be objective indicators of investment performance for use by corporate headquarters. Return on investment is employed because

> it is straightforward, understandable, company policy, and because there is no substitute for this measure when evaluating worldwide company profitability at a board of directors meeting.

Return on investment is generally not an important indicator of an individual subsidiary's or manager's performance in local currency.

Budgets of foreign operations are extremely important as performance indicators in U.S. dollars and local currency. When evaluating the performance of the foreign subsidiary and manager in local currency, budgets are the most helpful and important measures used. Budgets are used because

> they allow flexibility, subjectivity, individual variance analysis, the incorporation of environmental peculiarities, a degree of autonomy to be delegated to the subsidiary manager, insight as to future problem areas, and an evaluation of the manager based upon the operating costs that he controls.

When asked if their ranking of measures would change in geographic location, product line, or function performed, seven of those

questioned (44.0 percent) replied affirmatively. Twenty of those questioned (71.0 percent) said that expected ROI also varies with geographic location, product line, or function performed. Nineteen of the IDEs questioned (76.0 percent) felt that the environmental differences can be reflected in a corporation's system of internal performance evaluation. This is surprising because when questioned in person, the IDEs seemed more in favor of integrating environmental differences into their performance evaluation systems than their answers to the mailed questionnaire indicated.

Apparently the environmental factors are considered by allowing a high degree of subjective evaluation to operate within the performance evaluation system. Twenty-three (95.8 percent) of the twenty-four IDEs questioned on this issue admitted that hard-core quantitative information is used to evaluate the subsidiary (the investment), whereas the subsidiary managers are likely to be evaluated qualitatively, especially if they are operating in a changing environment. A few IDEs mentioned that "Due to the environmental considerations and the increased distance, more nonfinancial indicators of performance are incorporated into the evaluation of foreign operations than domestic." Nonfinancial measures of performance are also used to evaluate the manager when (1) the government intervenes in the business community, (2) the operating currency is unstable, and (3) general economic conditions warrant the use of such measures.

When comparing financial measures of similar manufacturing units of the firm operating in different countries, several IDEs were pessimistic concerning the usefulness of this information. Their comments included the following: "We use U.S. dollar comparisons to pinpoint problem areas; however, local currency provides the information necessary to isolate the real problems," "When the operating environments are so different, comparisons really don't mean anything," and "These comparisons would only have very general and often misleading application." Efficiency and productivity measures are compared by several corporations to avoid comparing strictly financial measures.

Generally, a meaningful comparison of foreign and domestic subsidiaries is accomplished by comparing operational levels after translation while excluding financial items and the effect of any foreign-exchange gain or loss. The same doubts as to the usefulness of these comparisons are prevalent.

Return-on-investment and gross profit margins may be compared in the long-run by top management; however, interpretations of these comparisons may be invalid because of operating differences.

Temporal comparisons are the most popular and thought to be more meaningful and useful than any of the previous comparisons. Growth ratios, productivity measures, and indicators of improvement from previous time periods are used frequently. Comparisons of budgets, profits, and liquidity positions are common. One IDE stated that "historical comparisons are meaningless when the operating environment changes so quickly." This statement does not appear to reflect the opinion of the majority.

None of the corporations is so naive as to think that comparisons of any two subsidiaries are valid without considering the circumstances of each. Many review local-currency financial statements to become aware of environmental peculiarities. Many recognize that comparisons of measures such as ROI are meaningless, and therefore compare yields or productivity while considering the size and environment of the subsidiaries. Many believe all comparisons to be misleading, and do not employ these measures when internally evaluating the performance of subsidiaries and managers.

The corporations reported no obvious separation of subsidiary and manager when evaluating the performance of operations. However, the interviews disclosed some very interesting incongruous information. The majority of firms will not hold a manager responsible or accountable for costs over which he has no control. Most of the comments on this issue of accountability are very similar. Some of the comments are as follows:

> We allocate uncontrollable costs to all subsidiaries in order to view the profitability of the subsidiary; however, we do not hold a manager responsible for these allocated costs.
>
> We separate non-operating items and try to evaluate a manager based upon what he controls.
>
> You cannot hold a manager accountable without also giving him control.
>
> The manager does not have control over the environment; therefore, we evaluate his performance in local currency; however, subsidiary performance is evaluated in U.S. dollars.

According to these comments, the corporations are separating the evaluation of the subsidiary from that of the manager.

Given that an IDE did report a preference for either U.S. dollar or local-currency financial statements on the original questionnaire, when asked why one or the other provided better information for internal performance evaluation purposes, the responses were fairly identical even though the approaches were different. One IDE answered that "U.S. dollar information is more convenient." Many agreed with him;

however, others felt that local-currency information was more convenient. Other comments included the following: "Local currency is a better indicator of operating performance" in contrast to "U.S. dollars reveal the true operating results." "Local currency provides a consistent basis for evaluation and prevents distortion" compared to "We use dollars for consistency" and "Local-currency information is far more understandable" versus "U.S. dollars are understandable and less confusing."

Several IDEs answered that U.S. dollars are used because the corporation is based in the United States, they have always been a dollar-oriented corporation, and they think in terms of dollars. Dollars are used by many corporations as a common denominator for comparative purposes. These corporations recognize that currency fluctuations are uncontrollable and feel that local-currency comparisons are meaningless. Then there are those who believe that either U.S. dollars or local currency may be used effectively if you understand translation.

What is clear from an integrated analysis of the answers reported on the questionnaire and the information gathered through interviews is that firms are rapidly moving toward an overall preference for using local-currency information in performance evaluation. Prior studies have shown a trend in this direction. McInnes and Mauriel pointed out a preference for U.S. dollar information while Robbins and Stobaugh and the Financial Executives Research Foundation found that firms used both local currency and U.S. dollars. The present study shows a clearer movement toward the use of local currency than prior studies have, and actually reports a preference for local-currency information by some IDEs.

SUMMARY AND CONCLUSIONS

Previous studies, cited earlier, investigated the use of different financial measures used in performance evaluation of foreign subsidiaries and managers. This study focused on the variety of financial measures used and the currency in which the data were prepared — U.S. dollars or local currency.

The MNEs studied use more U.S. dollar information than local-currency information when internally evaluating their foreign operations, although the majority of the IDEs think that local-currency financial statements provide better information than U.S. dollars for the evaluation of subsidiaries and managers. The U.S. dollar financial measures employed, in order of popularity, include profit, return on

investment, and budgets, whereas the local-currency measures include budget and profit. Return on investment in local currency is not a popularly used measure.

Nearly a majority of the corporations use U.S. dollar comparative measures in evaluating the performance of foreign operations. Comparisons of historical information are more often calculated in local currency than in U.S. dollars.

A majority of corporations use the same basic technique to evaluate subsidiary performance as they used to evaluate manager performance. Likewise, a majority of firms apply the same performance evaluation techniques domestically as they do abroad.

Reasons given by the IDEs as to why these particular performance evaluation methods are used and why U.S. dollar and/or local-currency financial information are used were identified during the personal and telephone interviews. This information provided insight into the development of the corporations' systems of performance evaluation and the problems that have evolved from these systems.

Given that a subsidiary operates within a country with a stable currency, an evaluation of the subsidiary's performance in either U.S. dollars or local currency should be meaningful. It is, however, important to evaluate foreign operations internally in local currency when the currency is unstable because of the distortions that occur in translating financial and comparative information into U.S. dollars. Today's foreign environment is plagued by highly and frequently fluctuating currencies; therefore, a foreign subsidiary's performance is more clearly reflected by its local-currency operating results. Past and present studies have shown that corporations are moving toward using local currency for internal performance evaluation purposes.

Comparisons of the past, present, and future operations of a subsidiary are far more meaningful and valid if calculated in local currency. Comparing either the U.S. dollar or local-currency results of subsidiaries operating in different environments is not a worthwhile endeavor. To achieve a meaningful comparison, the environmental peculiarities of each different operating environment would have to be isolated and weighted. This is an all but impossible task.

There is a problem with universally employing local-currency information for evaluating foreign operations. This problem was frequently mentioned during the personal and telephone interviews. It seems that high echelon managers do not understand how to interpret subsidiary results reported in local currency. These managers also have difficulty

understanding and interpreting the effect that foreign-exchange gains and losses have on the overall enterprise results. Decision making by boards of directors and management headquarters is generally based upon U.S. dollar information. If lower-level decision making is based upon local-currency information, problems with goal congruency and optimization of resources may result. Several corporations are already making an effort to minimize these problems by requiring that managers and directors become familiar with foreign-currency results.

The corporations recognize the value of using local currency for evaluating the performance of their foreign operations. The majority believe that local-currency financial statements provide better information than U.S. dollar financial statements for the internal performance evaluation of foreign subsidiaries and managers. Many of the individual comments gathered from the personal and telephone interviews indicate a clear understanding of the ramifications of refusing to change old habits in today's operating environment, that is, refusing to change from emphasizing U.S. dollar information to local-currency information.

Multinational Accounting: A Technical Note

M. A. FEKRAT*

Restating foreign-currency financial statements in terms of a common currency equivalent is crucial for providing a global view of the operations of multinational enterprises. Such entities cannot prepare consolidated financial statements unless the statements of their various subsidiaries are translated into a homogeneous unit of measure in the same scale of measurement.[1]

Current practice requires the use of the temporal principle of foreign-currency translation.[2] Under this approach, which was officially sanctioned by the Financial Accounting Standards Board (FASB) in 1975, assets, liabilities, revenues, and expenses are translated in a manner that does not alter their original measurement bases.[3] Initially elaborated by Lorensen to rectify the shortcomings of Hepworth's monetary-nonmonetary method, the temporal method has the principal advantage of not changing the attribute of the item being measured.[4] Accordingly, assets and liabilities carried at current values are trans-

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[1] Paul Rosenfield, "General Price-Level Accounting and Foreign Operations," *Journal of Accountancy* (February 1971): 62.

[2] For a discussion of this and other methods (current-noncurrent, monetary-nonmonetary, and the current-rate method), see Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 65-71.

[3] Financial Accounting Standards Board, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Statements, Statement of Financial Accounting Standard No. 8* (Stamford, Conn.: FASB, 1975).

[4] Samuel R. Hepworth, *Reporting Foreign Operations* (Ann Arbor, Mich.: University of Michigan, 1956); and Leonard Lorensen, *Reporting Foreign Operations of U.S. Companies in U.S. Dollars, Accounting Research Study No. 12* (New York: AICPA, 1972).

lated at current rates, and those carried at historical values are translated at historical rates. Revenue and expense items, too, are translated at exchange rates that prevailed when the underlying transactions occurred, although average rates may be used as a practical approximation.[5]

This paper argues that although the temporal method may be conceptually superior to other competing methods, it continues to rely on the theoretically objectionable system of exchange rates, pegged or floating, to achieve the translation process. Such exchange rates would be appropriate only within certain specified bands and often require highly restrictive and practically unattainable assumptions. To rectify these shortcomings, an alternative measure of translation based on a classical economic concept is outlined. The proposed measure has a more defensible theoretical footing and is free from the internal inconsistencies inherent under the temporal method based on conventional exchange rates. However, the arguments advanced in this paper and the conclusions reached are at best tentative and are offered to generate further debate rather than as a definitive treatment of the complexities involved.

CRITIQUE OF THE CONVENTIONAL APPROACH

The conventional approach of using exchange rates to translate foreign-currency financial statements into a common currency equivalent is fraught with conceptual difficulties. To be sure, the sales of a subsidiary serving a domestic market does not necessarily change every time the exchange rate changes, although the conventional approach would indicate such a change. This is because the conventional method is premised on the parent company perspective instead of a multinational perspective and assumes "as if" the subsidiary sales revenues were converted into the currency of the parent company during the period covered by the financial statements. This contradicts the "going-concern" assumption of multinational operations and distorts the accounting data, especially when sales and expense data from different countries are compared and consolidated.

Specifically, conventional exchange rates are theoretically inappropriate as a general-purpose medium of translation of foreign-currency financial statements because of the following considerations. First, exchange rates between currencies tend to equalize, at best, the prices of goods and services that enter into international trade. Multinational

[5] Choi and Mueller, *Multinational Accounting,* p. 69.

companies domiciled in different countries may not only derive their revenue from domestic markets, but may also use domestically manufactured and consumed goods (which may be mandated by host governments) in their production and revenue-generating operations. To the extent that exchange rates do not reflect differences in prices of such nontraded goods, translation based on conventional exchange rates might result in distorted data. Second, under the existing international monetary arrangements, exchange rates may not even equalize the prices of internationally traded goods owing to many factors, including intervention by governments in foreign-exchange markets and speculative movements of short-term capital. Third, the conventional approach ignores the effects of price-level changes in the translation process.[6] In a world where "double-digit" inflation has become a global phenomenon, it would be misleading to ignore the relative general purchasing power of currencies in comparative or consolidated financial data. Exchange rates in fact may never reflect the relative purchasing power of currencies unless the goods and services traded internationally are representative of the goods and services in general purchased within each country.[7]

Strictly speaking, the conventional approach would be theoretically valid for translation and consolidation purposes only when (1) relative prices of internationally traded goods and nontraded goods are the same between countries — that is, a shoeshine costs the same in terms of wheat in different countries, and (2) exchange rates equalize the prices of traded goods.[8] These two conditions are not likely to prevail under realistic conditions and, therefore, using the conventional approach to translate multicurrency balance sheet, revenue, and expense data into a single currency might not yield theoretically valid results.[9]

To illustrate this point, we will draw on the literature in international economics, especially upon a recent work by Jai-Hoon Yang.[10]

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[6] Paul Rosenfield, "Price-Level Accounting," p. 60.

[7] Ibid., p. 65.

[8] See Milton Gilbert and Irving B. Kravis, *An International Comparison of National Products and the Purchasing Power of Currencies* (Paris: Organization for European Economic Cooperation, 1954); Paul A. David, "Just How Misleading Are Official Exchange Rates?" *Economic Journal* (September 1972): 979-90; and Robin Barlow, "A Test of Alternative Methods of Making GNP Comparisons," *Economic Journal* (September 1977): 450-59.

[9] American Institute of Certified Public Accountants, *Reporting the Financial Effects of Price-Level Changes, Accounting Research Study No. 6* (New York: AICPA, 1963), pp. 148-49.

[10] Jai-Hoon Yang, "Comparing Per Capita Output Internationally: Has the United States Been Overtaken?" *Federal Reserve Bank of St. Louis Review* (May 1978): 8-15.

Assume the usual free-trade, two-country model: Home Country and Foreign Country. Home Country prices its goods in terms of HC and Foreign Country in terms of FC. Assume further that productivity in Home Country is higher than in Foreign Country so that Foreign Country's product of traded and nontraded goods per unit of all inputs is ⅘ and ⅕ of Home Country's, respectively. Under these conditions, it follows that any valid measure to translate Foreign Country's product in terms of Home Country's must fall between 20 and 80 percent of Home Country's product.

Now consider the hypothetical data in exhibits 1 and 2. The average real product is greater in Home Country than in Foreign Country, but the level of prices is assumed to be higher in Foreign Country than in Home Country. Exhibit 1 assumes relative prices to be the same in both countries, but exhibit 2 makes the more realistic assumption that relative prices are different.

Exhibit 1. Average Product and Identical Relative Prices

	Nontraded goods			*Traded goods*		
	Price	*Qt.*	*Total*	*Price*	*Qt.*	*Total*
Foreign country	FC 10	2	FC 20	FC 5	20	FC 100
Home country	HC 2	10	HC 20	HC 1	25	HC 25

Exhibit 2. Average Product and Different Relative Prices

	Nontraded goods			*Traded goods*		
	Price	*Qt.*	*Total*	*Price*	*Qt.*	*Total*
Foreign country	FC 20	2	FC 40	FC 2	20	FC 40
Home country	HC 2	10	HC 20	HC 1	25	HC 25

In exhibit 1, where relative prices between traded and nontraded goods are the same, the equilibrium exchange rate would be FC5/HC1 and Foreign Country's total product (FC 120) would be translated into Home Country's currency at FC 120 divided by FC5/HC1 = HC 24, or about 53 percent of Home Country's total product. This falls within the band indicated in exhibit 1 and would, therefore, be a valid measure. If a multinational company has purchased half of Foreign Country's nontraded goods (and shows that as expense in its

income statement), it would be translated as FC 10 divided by FC5/HC1 = HC2.

In exhibit 2, where relative prices between traded and nontraded goods are different, the equilibrium exchange rate under free trade conditions would equalize the prices of traded goods between the countries and would be FC2/HC1. Foreign Country's product translated into Home Country's currency would be FC 80 ÷ FC2/HC1 = HC 40, or approximately 90 percent of Home Country's product. This is outside the band of valid measures indicated in exhibit 1, and would, therefore, be inappropriate. Assuming that a multinational company consumed half of the nontraded goods of the Foreign Country in the course of its operations, it would show this at FC 20 ÷ FC2/HC1 = HC 10 on its financial statements, which is significantly at variance with the result obtained earlier.

It is apparent that only when (1) relative prices in the two countries are the same and (2) exchange rates are determined under free market conditions would the use of conventional exchange rates yield a theoretically valid measure for intercountry comparisons and translation of financial results. The foregoing assumptions are seldom met in practice as international productivity differentials and government intervention in domestic and foreign trade (via taxes, subsidies, tariff, and nontariff measures) distort the exchange rates and cause variations in relative prices. From our hypothetical examples above, it is evident that, other things being equal, the greater the productivity differentials between two countries, the wider would be the band of valid exchange rates and the extent of differences in relative prices that would be consistent with exchange rates within that band.[11] If it is correct, it implies that the use of conventional exchange rates for multinational accounting might be less objectionable between industrial and less developed countries than between the industrial countries themselves, where productivity differentials may be less pronounced.

Even within the band of valid exchange rates as determined by international productivity differentials, the temporal method suffers from several internal inconsistencies. This stems from the use of historical exchange rates for translating assets and liabilities carried at historical values and current exchange rates for those carried at current values.[12]

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[11] Yang (p. 9) assumes a productivity differential of ⅓ and ⅔ in the production of nontraded and traded goods and establishes a correspondingly narrower band of valid exchange rates for intercountry comparisons than that proposed in this paper.

[12] Choi and Mueller, *Multinational Accounting*, p. 69.

Implied here is the assumption that foreign-exchange losses/gains and foreign-currency price changes of items carried at historical values are largely offsetting, while there is no such relationship for items carried at current values.[13] The latter proposition is hardly plausible inasmuch as some items carried at current values (for example, inventories carried at replacement cost) may actually behave in the same manner as those carried at historical values while others (marketable securities) may compensate for anticipated exchange losses/gains through changes in their rates of return.[14] In fact, the temporal method requires that inventories be translated at historical exchange rates if carried at historical values (LIFO) and at current rates if carried at current values.[15] This duality in the treatment of inventories is related to the assumption that foreign-exchange gains/losses and foreign-currency price changes associated with inventories are offsetting in the one case and not offsetting in the other — depending on the accounting method chosen to carry the inventories![16]

A Proposed Alternative

The disadvantage of the temporal method is its partial application to multinational accounting of a classical concept in economics — the purchasing-power parity concept.[17] Originally developed by Gustav Cassel as a method of determining equilibrium exchange rates among nations in the post-World War I years, the concept states that the equilibrium exchange rate between two countries is equal to the ratio of their prices.[18] Thus, if the price level in Foreign Country is doubled, the equilibrium exchange rate between Home Country and Foreign Country would be halved. On the other hand, if Home Country's prices double and Foreign Country's treble, the exchange rate on Foreign Country in Home Country's market would fall from 100 to 66 percent.[19]

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[13] Robert Z. Aliber and Clyde P. Stickney, "Accounting Measures of Foreign Exchange Exposure: The Long and Short of It," *Accounting Review* (January 1975): 45.

[14] Ibid., p. 46.

[15] Choi and Mueller, *Multinational Accounting*, p. 70.

[16] For a discussion of some of the other practical problems, see Joseph E. Connor, *Accounting Reality — Foreign Currency and Inflation Accounting: Proposals for Reform* (New York: Price Waterhouse & Co., 1978).

[17] Aliber and Stickney, "Accounting Measures," pp. 45-46.

[18] See Gustav Cassel, *Money and Foreign Exchange after 1914* (New York: Macmillan, 1923). See also Bela Balassa, "The Purchasing Power Parity Doctrine: A Reappraisal," *Journal of Political Economy* (December 1964): 584-96.

[19] The more refined version of the purchasing-power concept is stated in relative terms. In this form, the concept states that changes in the equilibrium exchange

By advocating the use of historical exchange rates for items carried at historical values, the temporal method assumes the same relationship between prices and exchange rates that is entailed in the purchasing-power parity concept.[20] While admitting the relevance of the purchasing-power parity concept to items carried at historical values, the temporal method stops short of extending it to items carried at current values. It is here proposed that the purchasing-power parity concept be applied consistently to *all* the items, not just to those carried at historical values. Thus, current purchasing-power parity rates could be used to translate items carried at current values and historical purchasing-power parity rates could be used to translate items carried at historical values. As will be shown, the proposed approach resolves the major conceptual flaws and inconsistencies of the temporal method based on actual foreign-exchange rates.

The purchasing-power parity concept will first be applied to the hypothetcal data in exhibits 1 and 2. The parity rate here is computed simply as the ratio of the number of units of currency of one country to the number of units of currency of the other country required to purchase a given set of traded and nontraded goods. The results are shown in exhibit 3. In cases both where relative prices are identical and where they are different, the resulting measure of parities falls within the band of theoretically valid rates specified before. If, as assumed in the example, a multinational company purchased half of the nontraded goods of Foreign Country, it would translate this at FC 20 ÷ FC5/HC1 = HC4 where relative prices are identical, and at FC 20 ÷ FC3.3/HC1 = HC6 when relative prices are different. The latter is equal to the arithmetic average of the results obtained when conventional exchange rates were used for translation, that is, $(2 + 10)/2 = 6$.

When the purchasing-power parity concept is applied to current monetary items, the results become even more interesting. Assume a multinational firm holds FC 10,000 of net monetary assets at time t when the purchasing-power parity rate was FC 20 = HC1. Assume further that the net monetary assets remain unchanged during the accounting period ending at t_2, but that the level of prices increased from 100 to 110 in Home Country and from 100 to 120 in Foreign Country.

rate are proportional to changes in the ratio of foreign to domestic prices. See Harold E. Wyman, "Analysis of Gains or Losses from Foreign Monetary Items: An Application of Purchasing Power Parity Concepts," *Accounting Review* (July 1976): 545-58.

[20] Aliber and Stickney, "Accounting Measures," p. 45.

Exhibit 3. Home Country-Foreign Country Purchasing-Power Parities

1. Identical relative prices:

$$\frac{\text{FC } 10\ (2) + \text{FC5}\ (20)}{\text{HC2}\ (2) + \text{HC1}\ (20)} = \frac{\text{FC } 120}{\text{HC } 24} = \text{FC5/HC1}$$

FC 120 ÷ FC5/HC1 = HC 24
HC 24 ÷ HC 45 = 53 percent

2. Different relative prices:

$$\frac{\text{FC } 20\ (2) + \text{FC2}\ (20)}{\text{HC2}(2) + \text{HC1}\ (20)} = \frac{\text{FC } 80}{\text{HC } 24} = \text{FC3.3/HC1}$$

FC 80 ÷ FC3.3/HC1 = HC 24
HC 24 ÷ HC 45 = 53 percent

The purchasing-power parity rate at t_2 could be approximated as follows: FC 20 × (120/100 ÷ 110/100) = FC 20 × 1.0909 = FC 21.8182 = HC1.[21] The net monetary assets at t_2 would be translated at FC 10,000 ÷ 21.8182 = HC 458.33. However, if we were to maintain our purchasing power in terms of the currency of Home Country during the period, we should have the equivalent of FC 10,000 ÷ 20 = HC 500 × 110/100 = HC 550 at t_2. The difference between HC 550 and HC 458.33 (HC 91.67) represents the total amount of the loss for holding foreign-currency monetary assets. This loss is composed of (1) a loss that would have occurred if an equivalent amount of monetary assets in HC were held, and (2) a loss from the differential rates of inflation between the two countries.[22] These two amounts may be computed as follows:

(1) FC 10,000 × HC1/FC 20 × (1.00 − 1.10) =	HC 50.00
(2) FC 10,000 × HC1/FC 20 × ([1.10/1.20] − 1) =	41.67
Total	HC 91.67

These computations are essentially an extension of the usual price-level accounting to a multinational setting. If the monetary assets were actually converted into HC, they would be converted at the actual exchange rate prevailing at the time of conversion. This would, of course, give rise to an additional element of loss or gain, thereby either increasing or decreasing the total loss computed above.

[21] Wyman, "Foreign Monetary Items."
[22] Ibid., pp. 548-49.

CONCLUSIONS

Perhaps the most important conclusion that emerges from the analysis in this paper is that the conventional temporal method used to measure foreign-exchange losses/gains of multinational operations produces distorted results. This appears to reinforce the findings of other researchers in the field.[23] Our proposed approach uses a well-known classical economic concept to translate foreign-currency statements into a common-currency equivalent and simultaneously results not in a measure of foreign-exchange gains or losses, but in a measure of purchasing-power gain or loss in a multinational environment. This translation methodology seems to be superior to the conventional approach conceptually and for sharply delineating the end results.

It also follows that although the financial statements using the proposed approach provide significant parameters concerning a firm's potential exposure to foreign-exchange losses, the latter should be estimated primarily by evaluating other factors including political risks and geographcial location that have a more important bearing on exposure to exchange lossses.

[23] Aliber and Stickney, "Accounting Measures," p. 52.

Recording and Classifying Transactions in the Balance of Payments

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The details of recording international transactions in the balance of payments have long posed confusing problems for students, instructors, and even experts in the field. These problems stem in part from the failure to adopt a consistent approach to the double-entry accounting system of the balance of payments; without an understanding of its double-entry nature, one can neither construct a model balance of payments nor fully appreciate the significance of its various deficits and surpluses. In addition, the difficulties have been greatly aggravated in recent years by the increasing complexity of international payments stemming from the growth of multinational firms, including banks, and the introduction of new types of international financial instruments, such as Eurodollars.

This paper has two purposes. First, it presents and illustrates two simple rules, both familiar from a broader context, which can be uniformly applied in recording virtually any international transaction. These two rules are derived from viewing a nation's balance of payments as a statement of sources and uses of foreign exchange, analogous to a standard corporate or sector sources-and-uses-of-funds statement. The basic principles used in constructing a sources-and-uses-of-funds statement are straightforwardly applied to the balance of payments, thereby placing balance-of-payments accounting in a familiar analytical framework. Second, the paper indicates how various types

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of transactions are classified in the structural categories of the official U.S. balance of payments prepared by the Department of Commerce.

SOURCES AND USES

The usual textbook presentation of the balance of payments stresses (properly) that every international transaction must have two entries, a credit (+) and a debit (−). Two traditional principles are typically invoked for making the entries: (1) transactions that result in receipts from abroad are credits, while (2) transactions that result in payments abroad are debits. Thus, U.S. commodity exports are credits because we are paid; U.S. imports are debits because we do the paying.[1]

However, it is the essence of balance-of-payments double-entry accounting that each of these transactions must have a *contra,* a corresponding balancing entry, and that is where the confusion begins — namely, in how properly to perform a double-entry from a single transaction. In other words, an export credit must have a corresponding debit, and an import debit must have a corresponding credit to balance the accounts. For example, if an export is paid for by the foreign importer sending a check in dollars drawn on an American bank, thereby reducing a U.S. bank's liability to a foreigner, then the balancing entry is a "capital outflow" debit.

This brings in the second traditional principle: a reduction in U.S. liabilities to foreigners (or an increase in U.S. claims on foreigners) is a "capital outflow" and a debit, while an increase in U.S. liabilities to foreigners (or a decrease in U.S. claims on foreigners) is a "capital inflow" and a credit. In general, the first principle (first paragraphs this section) is applied to current-account entries and official monetary gold, and the second to capital-account entries. This definition of capital outflows and inflows leaves much to be desired, and the relationship between a credit in the current account and a debit in the capital account is far from clear.

The traditional explanation of balance-of-payments double-entry logic makes the balance of payments appear more singularly unique than it is. In fact, as a record of all economic transactions taking place

[1] For some standard textbook presentations of the balance of payments, see Herbert G. Grubel, *International Economics* (Homewood, Ill.: Richard D. Irwin, 1977); Harry D. Hutchinson, *Money, Banking and the United States Economy* (New York: Appleton-Century-Crofts, 1975); Charles P. Kindleberger, *International Economics* (Homewood, Ill.: Richard D. Irwin, 1973); Rita M. Rodriguez and Eugene E. Carter, *International Financial Management* (Englewood Cliffs, N.J.: Prentice-Hall, 1979); and Robert M. Stern, *The Balance of Payments* (Chicago: Aldine, 1973).

between the residents of one country and the rest of the world, it amounts to nothing more than a national statement of sources and uses of foreign exchange — similar, although not quite identical, to an ordinary corporate or sector statement of sources and uses of funds.[2] The conventional principles involved in constructing a corporate sources and uses of funds statement are for the most part applicable in constructing a national statement of sources and uses of foreign exchange. From this perspective, the double-entry recording of the balance-of-payments transactions fits into a familiar pattern and is therefore easier to understand and interpret.

A standard sources-and-uses-of-funds statement for a corporation is derived from its income statement and two balance sheets. The income statement yields corporate sources and uses of funds on the current account, and the balance sheets produce sources and uses of funds on the capital account. For the balance of payments, we do not have the convenience of an actual income statement and balance sheets to provide the data. Hypothetically, however, as will become clear, if an income statement were to be drawn recording all of a nation's current transactions with the rest of the world, every entry on that income statement would appear in the balance of payments — basically, forming its current account. The entries from the corresponding hypothetical balance sheets are the ingredients of the capital and official settlements accounts.

In a corporate sources-and-uses-of-funds statement, it is conventional to record sources of funds as credits (+, on the right-hand side) and the uses of funds as debits (−, on the left-hand side). The same conventions are applicable to the balance of payments viewed as a statement of sources and uses of foreign exchange. Thus, following common practice with respect to corporate sources-and-uses statements, the

[2] Several previous discussions have referred to the balance of payments as a sources-and-uses statement. See especially John P. Powelson, *Economic Accounting* (New York: McGraw-Hill, 1955), chs. 21-23. More recently, see Norman S. Fieleke, "Accounting for the Balance of Payments," *New England Economic Review*, Federal Reserve Bank of Boston (May/June 1971), and *What is the Balance of Payments?* Federal Reserve Bank of Boston (July 1976); Lawrence S. Ritter and William L. Silber, *Principles of Money, Banking, and Financial Markets* (New York: Basic Books, 1977), ch. 31; and Rodriguez and Carter, *Financial Management*, ch. 2.

For the derivation of sources-and-uses statements in general, see Ritter, *The Flow of Funds Accounts* (New York University Institute of Finance, 1968); Ritter and Silber, *Principles*, ch. 26; James C. Van Horne, *Financial Management and Policy* (Englewood Cliffs, N.J.: Prentice-Hall, 1977), ch. 26; and J. Fred Weston and Eugene F. Brigham, *Managerial Finance* (New York: Dryden Press, 1978), ch. 3.

following two rules may be stated to perform the necessary double entry for each international transaction:

1. Decreases in U.S. assets (real, financial, or services) due to their transfer to the rest of the world, and increases in U.S. liabilities to the rest of the world are sources of foreign exchange and hence credits (+, on the right-hand side).
2. Increases in U.S. assets (real, financial, or services) acquired from the rest of the world, and decreases in U.S. liabilities to the rest of the world are uses of foreign exchange and hence debits (−, on the left-hand side).

All transactions — with a few exceptions, to be mentioned later — between the residents of a country vis-à-vis the rest of the world can be double entried based on these two rules.

RECORDING AND CLASSIFYING TRANSACTIONS

Forty-four hypothetical transactions are described below and, on the basis of the two rules just cited, are double entried appropriately in exhibit 1, which is purposely designed to illustrate the principles involved. Every transaction has two parts, (a) and (b), *each* of which is subjected to these two rules to determine whether it is a source (+) or a use (−) of foreign exchange. The nature of the transaction and, in some cases, an arbitrary rule imposed by the Department of Commerce determine where each entry belongs within the overall structure of the balance-of-payments format. For clarity, the forty-four transactions have been classified into eight categories consisting of the major participants or types in international transactions. In some cases, a given transaction could be properly classified under more than one category, but for simplicity, each transaction is classified under only one category. The eight categories are individuals, business concerns, multinational firms, banks and other financial institutions, central banks and other official institutions, Eurocurrency and other interbank transactions, defense-related transactions, and those transactions related to the Organization of Petroleum Exporting Countries (OPEC). In the aggregate, all forty-four transactions yield a simplified illustrative model balance of payments as shown in exhibit 1. After becoming familiar with the way in which the rules work, complex formats such as the one currently used by the United States Department of Commerce[3] (see exhibit 2), as well as those used by other institutions, are

[3] The United States Department of Commerce has changed the balance-of-payments format several times during the last two decades. The most recent

understandable and useful. (All transactions are in millions of dollars, with the word "millions" assumed.)

Individuals

1. (a) An Italian private investor buys \$5 worth of computer equipment from a U.S. manufacturer. (b) Payment is made by the Italian firm sending a check denominated in lira to the seller, who exchanges it for dollars at his U.S. bank. The U.S. bank, in turn, sends the check to its Rome correspondent bank, thereby increasing its lira deposit in Italy.

Part (a) is an export of U.S. goods, which means a decrease in U.S. assets and therefore, according to Rule 1, a source (+) of foreign exchange. Part (b) is an increase in U.S. financial assets (holdings of lira deposits) and is therefore a use (−) of foreign exchange or a debit. In exhibit 1, (a) appears in the current account at I.1; (b) appears in the capital account at IV.1. (The entries in exhibit 1 are recorded in dollar amounts with the transaction number in parentheses.)

2. (a) American tourists in Mexico spend \$20 for souvenirs, obtaining the necessary pesos by cashing travelers checks at a Mexican bank. (b) The Mexican bank uses the travelers checks to increase its dollar balances in a U.S. bank.

Part (a) is an increase in U.S. assets, in the form of souvenirs or services. It is a use of foreign exchange or a debit (−), posted at I.2. Part (b) is an increase in U.S. liabilities to a Mexican bank. It is a source or a credit(+), posted at IV.2.

3. (a) An American jeweller purchases \$55 worth of gold from a French private investor and (b) pays for it by drawing on his French franc deposit account at a commercial bank in France.

Part (a) represents a purchase of "nonmonetary" gold or "for industrial purposes" gold and will be recorded as an import of merchandise. It is thus an increase in assets (real assets) and hence a use of foreign exchange, a debit (−), recorded at I.1. Part (b) represents

major change was in 1976. For a discussion of the differences among the last two complete formats, see the 1976 "Report of the Advisory Committee on the Presentation of Balance of Payments Statistics," *Survey of Current Business* (June 1976); the present author's review of same in *Journal of Economic Literature* (June 1977): 555-58; and Robert M. Stern et al., "The Presentation of the U.S. Balance of Payments: A Symposium," *Essays in International Finance,* no. 123 (Princeton, N.J.: Princeton University, International Finance Section, August 1977).

Exhibit 1. A Categorized Sources-and-Uses Presentation of the U.S. Balance of Payments

(In millions of dollars)

Uses of Foreign Exchange Debits (—)		*Sources of Foreign Exchange* Credits +			*Balance* Net	*Balance* Cumulative	
	Current Account						
I. Goods and services — current expenditures 1. Our merchandise imports	55 (3) 760 (4) 490 (5) 1,305	I. Goods and services — current receipts 1. Our merchandise exports	5 (1) 15 (6) 480 (12)	210 (28) 110 (29) 290 (36) 1,110	−195	−195	A. Trade or merchandise balance
2. U.S. tourist spending abroad,	20 (2)	2. Foreign tourist spending here	80 (10)	590 (14)			
3. Interest, dividends, royalties & income paid to people abroad	310 (30) 450 (41)	3. Interest, dividends, royalties, & income received from abroad	570 (11)	165 (15)			
4. Services rendered by foreign ships, airlines, insurance, etc.	50 (8)	4. Services rendered by U.S. ships, airlines, insurance, etc.					
5. U.S. military spending abroad	435 (38)	5. Foreign military spending here (Military agency sales contract)		270 (37)			
6. U.S. military grants of goods & services	240 (39)	6. Goods & services under U.S. military grant program		240 (39)			
	1,505			1,915	+410	+215	B. Goods and services balance
II. Unilateral transfers — current expenditures 1. Gifts, remittances, etc. from U.S. private 2. Gifts, remittances, etc. from U.S. gov't	120 (9) 110 (29) 230 (40) 460	II. Unilateral transfers — current receipts 1. Gifts, remittances, etc. to U.S. private 2. Gifts, remittances, etc. to U.S. gov't		0	−460	−245	C. Current account balance
	Capital Account						
III. Long-term capital: government & private (Increases in assets) 1. Direct investment by American firms or individuals abroad and/or decrease of foreign investment in U.S. (ownership interest) 2. Our purchases of foreign securities or increase in our lending abroad (lending)	480 (12) 150 (13) 590 (14) 165 (15) 550 (21) 470 (22)	III. Long-term capital: government & private (Decreases in assets) 1. Direct investment by foreign firms or individuals in U.S. and/or decreases of American investment abroad 2. Reductions in our holdings of foreign securities or increase in our borrowing abroad		310 (30) 200 (33) 600 (42) 180 (44)			

(Decreases in liabilities)			(Increases in liabilities)					
3. Reductions in foreign holdings of U.S. securities			3. Purchases by foreigners of U.S. securities		155 (17)			
		2,405			1,445	−960	−1,205	D. Basic balance
IV. Short-term private capital			IV. Short-term private capital					
(Increases in assets)			(Decreases in assets)					
1. Increases in our holdings of foreign	5 (1)	80 (10)	1. Reductions in our holdings of foreign		55 (3)			
money, in the forms of either foreign	15 (6)	330 (19)	money, in the form of either foreign		490 (5)			
currency or demand deposits in foreign	15 (7)	95 (20)	currency or demand deposits in foreign		15 (7)			
banks denominated in a foreign currency		65 (31)	banks denominated in a foreign currency		120 (9)			
and other short-term claims			and other short-term claims					
(Decreases in liabilities)			(Increases in liabilities)					
2. Reductions in foreign holdings of U.S.	570 (11)	85 (32)	2. Increases in foreign holdings	20 (2)	330 (19)			
money, in the form of either U.S.	115 (16)	200 (33)	of U.S. money, in the form of	760 (4)	95 (20)			
currency or demand deposits in	155 (17)	540 (34)	either U.S. currency or demand	50 (8)	65 (31)			
U.S. banks and other short-term	30 (18)	170 (35)	deposits in U.S. banks and	150 (13)	85 (32)			
assets		180 (44)	other short-term assets	115 (16)	540 (34)			
					170 (35)			
V. Miscellaneous			V. Miscellaneous					
1. Recapturing of Special Drawing Rights from U.S. by IMF			1. Allocating of Special Drawing Rights to U.S. by IMF		220 (26)			
2. Errors and omissions			2. Errors and omissions					
		2,650			3,280	+630	−575	E. Official settlements balance
VI. Balancing items			VI. Balancing items					
1. Decreases in short-term liabilities	280 (24)	270 (37)	1. Increases in short-term liabilities	30 (18)	25 (27)			
to official foreign agencies	290 (36)	600 (42)	to official foreign agencies	550 (21)	230 (40)			
		135 (43)		470 (22)	450 (41)			
				100 (25)	135 (43)			
2. Gold purchases (official		25 (27)	2. Gold sales (official		280 (24)			
monetary gold)		210 (28)	monetary gold)					
3. Increases in Special		100 (25)	3. Decreases in special					
Drawing Rights		220 (26)	drawing rights					
4. Increases in convertible		40 (23)	4. Decreases in convertible		40 (23)			
currencies and IMF gold tranche			currencies and IMF gold tranche		435 (38)			
		2,170			2,745	+575	0	
GRAND TOTAL		10,495	GRAND TOTAL		10,495			

Exhibit 2. U.S. International Transactions Official Balance-of-Payments Format Currently Used

Line (Credits +; debits −)	*In millions of dollars*
1. Exports of goods and services	+ 3,025
2. Merchandise, adjusted, excluding military *1, 6, 12, 28, 29, 36*	+ 1,110
3. Transfers under U.S. military agency sales contracts *37*	+ 270
4. Travel	
5. Passenger fares	
6. Other transportation	
7. Fees and royalties from affiliated foreigners	
8. Fees and royalties from unaffiliated foreigners	
9. Other private services	
10. U.S. government miscellaneous services	
Receipts of income on U.S. assets abroad:	
11. Direct investment	+ 1,325
12. Interest, dividends, and earnings of unincorporated affiliates *11, 14*	+ 1,160
13. Reinvested earnings of incorporated affiliates *15*	+ 165
14. Other private receipts *10*	+ 80
15. U.S. government receipts	
16. Transfers of goods and services under U.S. military grant programs, net *39*	+ 240
17. Imports of goods and services	− 2,810
18. Merchandise, adjusted, excluding military *3, 4, 5*	− 1,305
19. Direct defense expenditures *38*	− 435
20. Travel *2*	− 20
21. Passenger fares	
22. Other transportation *8*	− 50
23. Fees and royalties to affiliated foreigners	
24. Fees and royalties to unaffiliated foreigners *41*	− 450
25. Private payments for other services	
26. U.S. Government payments for miscellaneous services	
Payments of income on foreign assets in the United States:	
27. Direct investment	− 310
28. Interest, dividends, and earnings of unincorporated affiliates *30*	− 310
29. Reinvested earnings of incorporated affiliates	
30. Other private payments	
31. U.S. government payments	
32. U.S. military grants of goods and services, net *39*	− 240
33. Unilateral transfers (excluding military grants of goods and services), net	− 460
34. U.S. government grants (excluding military grants of goods and services) *40*	− 230

Exhibit 2 (cont.)

35.	U.S. government pensions and other transfers *29*	− 110
36.	Private remittances and other transfers *9*	− 120
37.	U.S. assets abroad, net (increase/capital outflow [−])	− 1,905
38.	U.S. official reserve assets, net	+ 160
39.	Gold *24 − (27 + 28)*	+ 45
40.	Special drawing rights *25, 26*	− 320
41.	Reserve position in the International Monetary Fund	
42.	Foreign currencies *(23 + 38) − 23*	+ 435
43.	U.S. government assets, other than official reserve assets, net	
44.	U.S. loans and other long-term assets	
45.	Repayments on U.S. loans	
46.	U.S. foreign currency holdings and U.S. short-term assets, net	
47.	U.S. private assets, net	− 2,130
48.	Direct investment	− 1,185
49.	Equity and intercompany accounts *33 − (12 + 13 + 14)*	− 1,020
50.	Reinvested earnings of incorporated affiliates *15*	− 165
51.	Foreign securities *22*	− 470
	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns:	
52.	Long-term *7 − 6*	0
53.	Short-term *10, 31*	− 145
	U.S. claims reported by U.S. banks, not included elsewhere:	
54.	Long-term *21*	− 550
55.	Short-term *(3 + 5 + 9) − (1 + 7 + 19 − 20)*	+ 220
56.	Foreign assets in the United States, net (increase/capital inflow [+])	+ 1,995
57.	Foreign official assets in the United States, net	+ 415
58.	U.S. government securities	+ 280
59.	U.S. Treasury securities	
60.	Other *(Σ, 18, 21, 22, 25, 27, 40, 41) − (Σ 24, 36, 37, 42, 43)*	+ 280
61.	Other U.S. government liabilities	
62.	U.S. liabilities reported by U.S. banks, not included elsewhere	
63.	Other foreign official assets *43*	+ 135
64.	Other foreign assets in the United States, net	+ 1,580
65.	Direct investment	+ 1,090
66.	Equity and intercompany accounts *30, 42, 44*	+ 1,090
67.	Reinvested earnings of incorporated affiliates	
68.	U.S. Treasury securities *16, 17*	+ 270
69.	U.S. securities other than U.S. Treasury securities	
	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns:	

Exhibit 2 (cont.)

70.	Long-term	
71.	Short-term *34*	+ 540
	U.S. liabilities reported by U.S. banks, not included elsewhere:	
72.	Long-term	
73.	Short-term (Σ, *4, 8, 13, 19, 20, 31, 32, 35*) − (Σ *11, 16, 17, 18, 32, 33, 34, 35, 44*)	− 320
74.	Allocations of Special Drawing Rights *26*	+ 220
75.	Statistical discrepancy (sum of above items with sign reversed)	
	Memoranda:	
76.	Balance on merchandise trade (lines 2 and 18)	− 195
77.	Balance on goods and services (lines 1 and 17)	+ 215
78.	Balance on goods, services, and remittances (lines 77, 35, 36)	− 15
79.	Balance on current account (lines 77 and 33)	− 245
	Transactions in U.S. official reserve assets and in foreign official assets in the United States:	
80.	Increase (−) in U.S. official reserve assets, net (line 38)	+ 160
81.	Increase (+) in foreign official assets in the United States (line 57 less line 61)	+ 415

This format appeared in the *Survey of Current Business* in June 1978 for the first time. It differs from that used from June 1976 to March 1978 only in that it includes reinvested earnings of incorporated foreign affiliates of U.S. direct investors and of incorporated U.S. affiliates of foreign direct investors.

a decline in private liquid claims held by Americans abroad. It is thus a decrease in the private sector's financial assets and hence a source of foreign exchange, a credit (+), recorded at IV.1.

Business Concerns

4. (a) A U.S. wholesaler buys $760 worth of transistor radios from Japan. (b) Payment is made by the American wholesaler sending a check denominated in dollars to the Japanese seller, who exchanges it for yen at his bank in Japan. The Japanese bank, in turn, sends the check to its U.S. correspondent bank, thereby increasing its dollar deposits in the United States.

Part (a) is a U.S. import of goods, which means an increase in U.S. assets and therefore, according to Rule 2, a use (−) of foreign exchange. Part (b) is an increase in U.S. liabilities to Japan — deposits are liabilities of the U.S. bank — which, according to Rule 1, is a source (+) of foreign exchange. In exhibit 1, (a), the import debit,

appears in the current account at I.1; (b), the increase in short-term liabilities to foreigners' credit, appears in the capital account at IV.2.

5. (a) A U.S. retailer buys $490 worth of diamonds from South Africa. (b) Payment is made by the retailer via a money order denominated in rands purchased at his U.S. bank (the U.S. bank maintains a deposit denominated in rands at a South African bank).

Part (a) is the same as the previous transaction; it is an increase in U.S. assets and therefore a use (−) of foreign exchange. Part (b), however, is different; payment is made not by an increase in U.S. liabilities but by a reduction in U.S. financial assets. When the U.S. bank sells rands to the U.S. importer, it draws on its account at the South African bank, so that the U.S. bank's holdings of foreign funds (rands) decline by $490. According to Rule 1, a decline in assets held by U.S. residents is a source of foreign exchange and a credit (+). In exhibit 1, (a) again appears at I.1, but this time (b) appears in the capital account at IV.1.

6. (a) An American exporter sells $15 in merchandise (b) on dollar-denominated open-book credit to a German importer.

Part (a) is an export. A decline in U.S. assets is a source, a credit (+), and is recorded at I.1. Part (b) is a short-term claim, an account receivable, held by the U.S. exporter against the German customer. Thus it is an increase in a U.S. financial asset, a use, a debit (−), and is recorded at IV.1.

7. (a) & (b) The U.S. exporter above gives its U.S. bank the account receivable for collection.

When this occurs, the exporter's accounts receivable from foreigners declines. This is a source and a credit (+), recorded in IV.1. The U.S. bank receiving the account receivable for collection now has a short-term claim on the German importer, which is commonly referred to as a bank collection. This is an increase in U.S. assets and a use of foreign exchange, a debit (−), recorded at IV.1. Note that if transactions 6 and 7 are combined, the net entries remaining are the export credit at I.1 and the bank collection short-term claim debit at IV.1. However, sometimes either both the bank and the corporation report the same account receivable to the United States Treasury Department,[4] or the latter fails to report its cancellations; there will

[4] The United States Treasury Department collects most of the capital account data as well as the interest and dividend income data for the current account from financial institutions and corporations engaged in international transactions. The Treasury then supplies the data to the Balance of Payments Division of the Department of Commerce.

then be double counting of debits, forcing the creation of an error and omissions credit (in Part V of exhibit 1).

8. (a) The U.S. import of radios from Japan described in transaction 4 requires transportation involving freight charges of $50. A Greek vessel is used to transport the radios. (b) Payment is made to the Greek shipping line by the U.S. importer with a check drawn in dollars on a U.S. commercial bank.

Part (a) is an increase in intangible assets (services) and via Rule 2 is a use (−) of foreign exchange, posted in exhibit 1 at I.4. Part (b) is an increase in U.S. liabilities to foreigners and thus, via Rule 1, a source (+), entered at IV.2. The dollar check paid to the shipowner will probably be exchanged for drachma deposits at his own bank in Greece, and the Greek bank in turn will most likely send the check to the U.S. to be credited to its account at a U.S. bank. It is this end result that is reflected in the balance of payments.

9. (a) A U.S. corporation donates $120 to the Italian organization in charge of the restoration of Venice. (b) Payment is made by drawing on the U.S. firm's lira deposits held at an American bank's branch in Italy.

This is one of the four types of international transactions in which either part (a) or (b) fails to fit the rules and therefore an arbitrary decision must be made as to how to record it in the balance of payments. The four are those involving (1) unilateral transfers and grants, (2) allocations of Special Drawing Rights (SDRs) by the International Monetary Fund (IMF), (3) interest and dividends payments/receipts, and (4) U.S. official purchases of domestically mined gold. This transaction, as well as transactions 10, 11, 14, 15, 26, 28 to 30, and 39 to 41, illustrates the ways in which these four exceptions to the rules are treated. Part (b) of this transaction fits Rule 1 in that it represents a decline in U.S. financial assets (namely lira deposits), and hence it is a source (+) of foreign exchange entered in exhibit 1 at IV.1. But (a) fits neither rule: it does not represent an increase or a decrease in either assets or liabilities. Arbitrarily, unilateral transfers such as gifts and donations are considered uses (−) of foreign exchange and recorded in exhibit 1 at II.1. (One could possibly force unilateral transfers of this kind into Rule 2 by reasoning that such spending buys an intangible asset, such as goodwill.)

10. (a) A U.S. corporation receives an $80 increase in its deposits in a Brussels bank, (b) as payment of interest on its portfolio investments in Belgium.

Part (a) is clearly an increase in U.S. assets abroad and by Rule 2 is a use of foreign exchange or a debit (−); it is recorded at IV.1. But part (b) poses problems, since it does not represent an increase or a decrease in either assets or liabilities. Arbitrarily, the receipt of interest and dividends is recorded as a source of foreign exchange, a credit (+), at I.3. One could "force" the receipt of interest and dividends into Rule 1 by assuming that before these assets were transferred from Belgium to the United States, the U.S. corporation actually held them abroad. Hence, when the transfer occurs, it represents a decline in assets held abroad. Alternatively, those familiar with the actual construction of a statement of sources and uses of funds will recognize that dividends, interest, and royalty payments may be directly considered *uses* without associating these with changes in levels of assets or liabilities. Similarly, dividends, interest, and royalty receipts may be directly considered *sources* without relating them to changes in levels of assets and liabilities.

11. (a) A U.S. multinational corporation receives $570 in dividends on its direct investment in France, (b) with payment made in dollars by drawing on the French firm's deposits at a U.S. bank.

Part (a), the receipt of interest, is recorded arbitrarily as a source, a credit (+), at I.3. Part (b), the form that the payment takes, represents a decline in U.S. dollar liabilities to foreigners. As such it is a use, a debit (−), recorded at IV.2.

Multinational Firms

12. (a) A U.S. multinational corporation expands its direct investment abroad by installing $480 worth of machinery in its plant in Venezuela. (b) The machinery is shipped directly to Venezuela from the parent company in Florida.

Part (a), an example of direct foreign investment, represents an increase in U.S.-owned assets held abroad.[5] It is recorded as a use (−) of foreign exchange, based on Rule 2, and entered on exhibit 1 at III.1. Part (b) shows how the asset is "paid for" by an export of goods (payment in kind); as an export, it is a source (+), entered in the current account at I.1.

13. (a) An American multinational corporation lends $150 for six

[5] According to the rules of the Department of Commerce, direct foreign investment abroad is defined as U.S. ownership of 10 percent or more of a foreign-based enterprise. Similarly, direct foreign investment in the United States is defined as foreign ownership of 10 percent or more of a U.S.-based enterprise.

months to its subsidiary abroad. (b)The subsidiary uses the dollars to pay a French supplier who in turn deposits the dollars in a Eurodollar account at a U.S. bank's branch in France. (It could also be a French Eurodollar bank or any other European Eurodollar bank.)

The loan from parent to subsidiary abroad, part (a), is an increase in claims on "foreigners" and for balance-of-payments purposes, this increase in financial assets is classified as direct foreign investment.[6] It is a debit (−) and recorded at III.1. Part (b) ultimately implies an increase in liquid liabilities of U.S. banks to foreign banks. An increase in a liability is a source of foreign exchange and a credit (+), recorded at IV.2. (See Appendix A.)

14. (a) An American corporation's earnings of $590 from its ***non-incorporated*** *foreign branch in Germany (b) are left in that country for reinvestment in the branch.*[7]

Part (a), the receipt of income, is arbitrarily recorded as a source of foreign exchange or a credit (+) at I.3. Part (b) is clearly an increase in U.S. assets abroad, as U.S. direct foreign investment is increased. This is a use of foreign exchange, a debit (−), recorded at III.1.

15. (a) A U.S. corporation's affiliate, ***incorporated*** *in a foreign country, earns $165 and (b) decides to leave the earned income to be reinvested in the subsidiary abroad.*

This type of transaction was recorded in the U.S. balance of payments for the first time in June 1978. In the past, retained earnings transactions (nonrepatriated income) between the parent corporation and its affiliate, incorporated in a foreign country, had arbitrarily been excluded from balance-of-payments transactions. Perhaps this was due to the difficulty of obtaining the data, together with the fact that the volume was small. In recent years, however, the volume has increased significantly. Also, this change in the U.S. balance-of-payment recording brings U.S. practice in line with IMF standard accounting pro-

[6] Any capital outflow from a parent to its subsidiary abroad is recorded as direct foreign investment for balance-of-payments purposes. The maturity of the loan is irrelevant. This is done partly because in some cases it is difficult to segregate such capital flows by maturity, partly because in some foreign countries there are restrictions on repatriation of income on investment but not on loans. Thus, many multinational corporations supply funds to their subsidiaries in the form of loans with different maturities, rather than in equity form.

[7] Branches are defined as unincorporated affiliates which have no legal identity apart from the parent firm. Subsidiaries are incorporated affiliates.

cedure. Part (a) of this transaction is recorded as a credit (+) at I.3 in exhibit 1 because earned receipts on past investments are arbitrarily classified as a credit (+). Part (b) is recorded as a debit (−) at III.1 because reinvested earnings are a direct investment, and an increase in U.S. investment represents an increase in U.S. assets, a use of foreign exchange, and hence a debit (−). Exhibit 2, the most current balance-of-payments format (since 1978), contains specific categories to enter this transaction. Accordingly, the credit is recorded in line 13 whereas the debit is recorded in line 50. If the firm were a foreign incorporated affiliate in the U.S., the balance-of-payments entries in exhibit 1 would be inverted from those stated above. In exhibit 2, the debit would be in line 29 and the credit in line 67.

Banks and Other Financial Institutions

16. (a) A U.S. bank sells $115 worth of U.S. treasury bills to a French investor, (b) who pays with his dollar deposits at another U.S. bank.

Part (a) represents an increase in U.S. government *short-term* liabilities to foreigners and is thus a source of foreign exchange and a credit (+); (b) is a debit (−), a decline in U.S. bank deposit liabilities to foreigners. Part (a) is recorded at IV.2 since it represents a short-term claim of a private foreigner. Even though the treasury bills are a liability of the United States Treasury, the holder of the claim is a private foreigner, and since the recording is performed, with very few exceptions, on the basis of who owns the claim, it is recorded at IV.2. Part (b) is recorded in IV.2 since it represents a decline in liabilities to private foreigners.

17. (a) A U.S. bank sells $155 worth of U.S. treasury long-term bonds to an investor in Spain. (b) The Spanish investor pays by drawing on his dollar deposits at the same U.S. bank.

Part (a) of this transaction is an increase in U.S. government *long-term* liabilities to foreigners and as such, it is a source, a credit (+), recorded at III.3. Part (b), a reduction in liquid liabilities to private foreigners, is a use, a debit (−), recorded at IV.2.

18. (a) A Netherlands commercial bank transfers $30 of its dollar deposit in a U.S. bank to (b), a guilder deposit in the Netherlands central bank.

Part (a) is a decline in U.S. deposit liabilities to private foreigners and thus a use (−), entered in exhibit 1 at IV.2. Part (b) depends on what the Netherlands central bank does with the dollar check drawn on a U.S. bank. If it deposits the check in the United States, the result

would be an increase in a U.S. liability to a foreign official institution; thus it is a source (+) and entered at VI.1, as has in fact been recorded. Alternatively, the Netherlands central bank could have used the check to buy guilders from the New York Federal Reserve Bank; in that case, there would be a decrease in U.S. assets, also a credit and a source of foreign exchange but one that would be recorded at VI.4.

19. (a) A U.S. bank accepts a $330 draft from a French importer denominated in Deutschemarks. (b) The French importer discounts the $330 acceptance[8] *with the same U.S. bank receiving dollar deposits for this amount.*

Part (a) is an increase in short-term claims of a U.S. resident. This is a use of foreign exchange, a debit (−), recorded at IV.1. Part (b) is an increase in short-term liabilities to foreigners, a source of foreign exchange, a credit (+); it is recorded at IV.2. This type of transaction would most likely enter the balance of payments slightly changed because the party discounting the acceptance at the bank would receive a sum less than the face value of the acceptance. Therefore, part (b) of the transaction, the discounting of the acceptance, will create a short-term liability (the credit) of say $320 rather than the full $330. That means that part (a) of the transaction, the bank's claim against nonresidents (the debit), is $330, but the liability (the credit) is $320. When the bank sends its monthly report to the United States Treasury, which includes only assets and liabilities vis-à-vis nonresidents, it will show debits greater than credits by $10. In that case, for balance-of-payments recording purposes, errors and omissions must be credited in the amount of $10.

20. (a) A U.S. bank purchases $95 worth of commercial paper denominated in Canadian dollars from a Canadian corporation. (b) It pays for the commercial paper by crediting the deposit account that the Canadian corporation maintains at a bank in the United States.

Part (a) is an increase in U.S. short-term financial assets (claims), a use of foreign exchange, a debit (−), recorded at IV.1. Part (b) is an increase in U.S. liabilities to private foreigners, a source, a credit (+), recorded at IV.2.

[8] An acceptance, also a banker's acceptance, is a letter of credit, an export draft, trade bill, or any other instrument of trade financing signed by a leading bank, thus becoming a negotiable instrument. For a detailed description of the various import and/or export financing instruments see: Morgan Guaranty Trust Company, *The Financing of Exports and Imports* (1977); H. E. Evitt, *A Manual of Foreign Exchange* (London: Pitman, 1971); and D. P. Whiting, *Finance of Foreign Trade* (London: McDonald & Evans, 1973).

21. (a) A U.S. commercial bank lends $550 for a three-year term to the government of Argentina. The proceeds of the loan are used to pay for oil imports from oil companies owned by the government of Venezuela. (b) The Venezuelan government decides to keep the dollars received as part of its official reserves in the form of dollar deposits at a bank in the United States.

The loan made by the U.S. bank, part (a), represents an increase in U.S. long-term financial claims (assets) against the government of Argentina. It is a use of funds, a debit (−), and since it is a claim of a private institution in the United States, it is recorded at III.2. Part (b) results in an increase in U.S. liabilities to foreign official agencies, that is, the central bank of Venezuela. The increase in liabilities is a source, a credit (+), and since a foreign official institution owns the claim, it is recorded at VI.1.

Central Banks and Other Institutions

22. (a) The Italian government sells a $470 issue of long-term government bonds, denominated in dollars, to U.S. investors, and (b) keeps the dollar proceeds in its official exchange reserves in the form of deposits at U.S. commercial banks.

Part (a) is an increase in U.S. holdings of financial assets, and it is therefore entered as a use (−) of foreign exchange at III.2 in exhibit 1. The bonds are issued by a government, not a private corporation. The claim, however, is held by private U.S. investors. In the balance-of-payments accounts, the structural classification of a transaction always denotes who *owns* the claim rather than who *issued* it. Part (b), an increase in U.S. deposit liabilities owed to a government rather than a private individual or firm, is entered as a credit (+) or source of foreign exchange in exhibit 1, at VI.1. The entry is at VI.1 rather than IV.2 because it is a foreign government claim rather than a foreign private claim against the United States. For balance-of-payments accounting purposes, it makes no difference if the foreign government deposits are kept at the Federal Reserve Bank of New York or at a private commercial bank in the United States. In practice, deposits of foreign governments are kept at both the Federal Reserve Bank of New York and at U.S. commercial banks. In either case, they are considered official deposits.

23. (a) The Federal Reserve buys $40 worth of British pounds (b) with Swiss francs in an effort to bolster the pound.

Part (a) is an increase in official U.S. holdings of pounds (assets)

and hence a use of foreign exchange and a debit (−). Part (b) is a decrease in official U.S. holdings of Swiss francs (assets) and thus a source of foreign exchange, a credit (+). Both parts of this transaction are entered in exhibit 1 at VI.4.

24. (a) The central bank of France purchases $280 worth of gold, this time from the United States Treasury, and (b) pays by again drawing its official deposits at a bank in the United States.

Part (a) is a reduction in official U.S. reserve assets (gold) and thus a source (+) of foreign exchange, while (b) is a reduction in U.S. liabilities to France and therefore a use (−). Part (a) is entered in exhibit 1 at VI.2, (b) at VI.1.

25. (a) Mexico's central bank sells $100 worth of IMF Special Drawing Rights to the Federal Reserve Bank of New York. (b) The Federal Reserve pays for the SDRs by increasing Mexico's dollar deposit at the Federal Reserve Bank of New York.

Part (a) increases official U.S. reserve assets, which by Rule 2 is a use or a debit (−); (b) is an increase in official U.S. liabilities, a source or a credit (+). Part (a) is entered at VI.3, and (b) at VI.1.

26. (a) The United States acquires $220 of SDRs (b) as the IMF allocates that amount of SDRs to the United States.

Part (a) is an increase in official U.S. reserve assets and, based on Rule 2, a use of foreign exchange or a debit (−); it is entered in exhibit 1 at VI.3. But what happens to the *contra,* the corresponding balancing entry? It must be a source of foreign exchange or a credit (+), but Rule 1 is not applicable since there is neither a decrease in U.S. assets nor an increase in U.S. liabilities. It is obvious, nevertheless, that the receipt of SDRs is in itself a source of foreign exchange. Arbitrarily, then, whenever there is an allocation of SDRs by the IMF, it is entered as a source of foreign exchange in the miscellaneous capital account at V.1.

27. (a) The United States Treasury buys $25 worth of newly mined gold from the South African government and (b) pays for it with dollars which the South African government chooses to leave in its deposit account at a bank in the United States.

Part (a), gold acquired for monetary purposes, is an increase in official U.S. reserve assets. As such, it is a use of foreign exchange, a debit (−), recorded at VI.2. Part (b), however, represents an increase in official U.S. liabilities to official foreigners, a source (+), recorded at VI.1. The purchase of gold could have been made from

any other country or official institution, and the nature of the recording would not have changed unless the payment for the gold were in SDRs or other convertible currencies. In that case, the United States would have lost assets in the form of SDRs (or convertible currencies) and, according to Rule 1, that decrease in assets would have been a source of foreign exchange and a credit recorded at VI.3 (or VI.4). What if the gold had been bought from a private mine in Africa? In that case, part (a) would still be recorded as a debit at VI.2, but part (b) would be recorded as a credit at IV.2 if the payment were in dollars, representing an increase in U.S. dollar liabilities to nonofficial foreigners. On the other hand, if the payment were made in foreign currency held by the United States Treasury, part (b) would be recorded as a credit at VI.4.

28. (a) The United States Treasury buys $210 worth of newly mined gold from a mining company in the United States. (b) ?...

Part (a), given the nature of gold, is an increase in the official reserve asset holdings of the United States. As such, it is recorded as a use of foreign exchange and entered in exhibit 1 as a debit (−) at VI.2. Part (b), however, cannot be analyzed in orthodox terms, since no transaction has occurred between residents of the United States and residents of the rest of the world. Arbitrarily, therefore, to balance the accounts, a credit (+) is posted as a source of funds in the merchandise export account, at I.1, even though no export has actually taken place.[9]

29. (a) The U.S. government ships $110 of wheat to India (b) as a gift.

Part (a) is an export, reducing U.S. assets, and is thus a source (+) of foreign exchange recorded in exhibit 1 at I.1. Part (b), however, again fits neither rule: it does not represent an increase or a decrease in either assets or liabilities. Arbitrarily, unilateral transfers, such as gifts and donations, are recorded as uses (−); in this case, it is entered in exhibit 1 at II.2. (Again, one could "force" unilateral gifts into Rule 2 by reasoning that they buy an intangible asset such as goodwill.)

30. From a stock purchase in a U.S. corporation undertaken several years earlier which represented 15 percent ownership in that corporation, (a) an Arabian government receives $310 in dividend income (b) which is reinvested by the Arabian country in the same corporation.

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[9] For a logical explanation of this entry, see John P. Powelson, *Economic Accounting* (New York: McGraw-Hill, 1955), pp. 390-91.

Part (a), the actual payment of dividends by the United States to a foreign country, again does not represent an increase or a decrease in either assets or liabilities. Arbitrarily, the payment of dividends from the United States to foreigners is recorded as a use of foreign exchange, a debit (−), at I.3. Part (b) reduces U.S. assets vis-à-vis foreigners and represents a source of foreign exchange, a credit (+), and is recorded at III.1. Official foreign government reinvested earnings have always been treated as the reinvested earnings of a nonincorporated branch. See transactions 14 and 15.

Eurocurrency and Other Inter-Bank Transactions

31. (a) An American corporation transfers $65 from a bank in the United States to a Eurodollar bank in London.[10] *(b) The Eurodollar bank in London maintains deposit balances at another bank in the United States and chooses to add this $65 to its deposits in that U.S. bank.*

Part (a) is an increase in an American corporation's claims (financial assets) on a foreign bank. More specifically, it represents a nonbank liquid claim on foreigners. This is a use of foreign exchange, a debit (−), recorded at IV.1. The fact that the financial asset is denominated in dollars is irrelevant; it is a U.S.-owned claim on a foreign bank, and whether that bank records the claim in pounds or dollars makes no difference. In part (b), a London bank increases its claims on a U.S. bank. From the U.S. balance-of-payments point of view, U.S. liquid liabilities to foreigners increase. This is a source, a credit (+), recorded at IV.2. Another possible outcome is that the London bank, or someone else who receives the check in due course, uses the check to buy pounds and buys them from a U.S. bank. Here the United States loses assets in the form of foreign currency; this is also a source but one that would be recorded at IV.1. Still another possibility is that the London bank exchanges the dollar check for pounds at the Bank of England. The Bank of England in turn uses the dollar-dominated check to increase its official deposits at the Federal Reserve Bank of New York. In this case, U.S. liabilities to a foreign official institution will increase; this is also a source and would be recorded at VI.1.

32. (a) A U.S. commercial bank borrows $85 for three months from its London branch. (b) The London branch maintains dollar deposits at the U.S. parent bank as reserves for its Eurodollar deposit liabilities.

[10] Eurodollar banks are those banks outside the U.S. territory that accept dollar deposits and make loans denominated in dollars.

The borrowing by the U.S. parent bank results in an increase in liquid liabilities to its foreign branch. This is a source, a credit (+), recorded at IV.2. When the London branch lends dollars to the U.S. parent, it loses an equal amount of the dollar reserves it had as deposits at the U.S. parent bank. To the parent bank in the United States, this is a decline in its (deposit) liabilities to the foreign branch and a use of foreign exchange, a debit (−), which is also recorded at IV.2. (See Appendix B.)

33. (a) An American investor sells some land it owns in Peru to a Japanese firm for $200. (b) The Japanese firm pays the U.S. investor with a check drawn on its dollar deposits held at a Eurodollar bank in Zurich.

Part (a) is a decrease in U.S. holdings of real fixed assets abroad. This is a source, a credit (+), and is recorded as direct foreign investment at III.1. Part (b) is a decline in short-term liquid liabilities to private foreigners. It is a use of foreign exchange, a debit (−), recorded at IV.2. This is because it is assumed that all Eurodollar banks maintain dollar deposits in U.S. banks as reserve against their dollar deposit liabilities. When a depositor at the Eurodollar bank writes a check on that account in payment to a party who does not keep an account in the same Eurodollar bank, then the Eurodollar bank in turn loses dollar deposits in the United States (reserve dollar deposits). In fact, Eurodollar banks maintain very small dollar deposits (relative to their dollar liabilities) in U.S. banks. They hold instead dollar or other hard-currency donominated assets which they can convert into dollar deposits if a dollar claim is presented to them for payment. In any case, the final debit (−) in the balance of payments will most likely be recorded in short-term liquid capital as a decrease in liabilities to foreigners.

34. (a) A U.S. corporation borrows $540 from the London branch of a U.S. bank. (b) The U.S. corporation uses the funds to pay for purchases from another U.S. firm, which in turn deposits the dollars at another U.S. bank.

When a U.S. corporation borrows from a non-U.S. resident bank, U.S. short-term liabilities to foreigners increase. Thus part (a) of the transaction is a source, a credit (+), and recorded at IV.2. With respect to part (b), the London branch which had either owned the reserves, perhaps as deposits in its parent U.S. bank or in any other U.S. bank (or was forced to acquire them to settle this transaction),

will lose an equal amount of reserves. This means the liquid liabilities of the parent bank (or any other U.S. bank) to the London branch decline. This is a use, a debit (−), recorded at IV.2.

35. (a) A Eurodollar bank in Germany lends $170 to a German multinational firm (b) that uses the funds to buy Swiss francs at a Swiss bank.

Part (a) will result in a decline of U.S. liabilities to the German bank. This is a use of funds, a debit (−), recorded at IV.2. Part (b) will result in an increase of U.S. liabilities to the Swiss bank. This is a source, a credit (+), also recorded at IV.2. When the net balance for the short-term private capital accounts is obtained in exhibit 1, this transaction (as well as transactions 7, 16, 19, 20, 31, 32, and 34) will cancel out.

Defense-Related Transactions

36. (a) The government of Israel purchases $290 worth of military equipment from a private manufacturer in the United States, (b) paying by check drawn on its dollar deposits at a bank in the United States.

Part (a) is an export of goods, a decrease in assets, and therefore a source (+) of foreign exchange, entered at I.1. Part (b) is a decrease in U.S. liabilities, hence a use (−), entered at VI.1.

37. (a) The government of Iran purchases $270 worth of military equipment from the United States Defense Department. (b) It pays by drawing on its dollar deposits at the Federal Reserve Bank of New York.

Part (a) is an export of goods, a decrease in real assets, and hence a source (+) of foreign exchange and a credit. It is entered at I.5. Part (b) represents a decline in official U.S. short-term liabilities to foreigners, a use (−), entered at VI.1. Note that this and transaction 36 are almost identical except that the purchase in 36 is from a private manufacturer, and the credit is recorded as an export. Here the purchase is from a U.S. government agency, and the credit is entered in foreign military spending (military agency sales contract).

38. (a) A U.S. military agency purchases $435 in goods and services from private firms in Spain. (b) It pays for the goods and services with peseta deposits that it held in Spain's central bank.

The purchase is an increase in U.S. military assets and hence a use (−) of foreign exchange, recorded at I.5. The payment is a decline in official U.S. liquid assets held abroad, a source (+); it is recorded

at VI.4, rather than at IV.1, because the owner of the financial assets is the U.S. government, not a private person or firm.

39. (a) The United States ships $240 in goods and services to Greece (b) under an official military grant program.

Part (a) of this transaction fits Rule 1 in that it represents a decline in U.S. assets, and, hence, it is a source (+) of foreign exchange. It is recorded as a military grant at I.6 in exhibit 1. But (b) fits neither rule; it represents neither an increase nor a decrease in either assets or liabilities. Arbitrarily, military grants of goods and services are considered uses (−) of foreign exchange and recorded in exhibit 1 at I.6. (One could possibly force military grants of goods and services into Rule 2 by reasoning that such spending buys an intangible asset, such as perimeter defense or goodwill.)

40. (a) The United States increases Turkey's official dollar holdings at the Federal Reserve Bank of New York by $230 (b) in fulfillment of a military grant.

Part (a) fits Rule 1 in that it represents an increase in U.S. liabilities to foreign official institutions and is thus a source (+) of foreign exchange. It is recorded at VI.1 in exhibit 1. Part (b), however, fits neither rule. Like transaction 39, it is arbitrarily labeled as a use (−) and recorded as a unilateral transfer at II.2. The only difference between part (b) of this transaction and part (b) of transaction 39 is that 39, a military transfer of goods and services, is entered at I.6, while here, as a military transfer in cash, it is entered under unilateral transfer at II.2.[11]

OPEC-Related Transactions

41. (a) An American multinational corporation engaged in the production, distribution, and marketing of oil pays an Arabian country $450 in royalties. (b) The Arabian country chooses to keep the dollars as an interest-earning deposit at a bank in New York.

Part (a), the royalty payment, is neither an increase nor decrease in an asset or a liability. It is arbitrarily classified as a use of foreign exchange and a debit (−), recorded at I.3. Part (b) is an increase in U.S. dollar liabilities; it is hence a source, a credit (+), and is recorded at VI.1 since the claim is held by an official foreign institution. These "petrodollars" become a balancing item. It is generally assumed

[11] The category "unilateral transfers" includes all nonmilitary government and private gifts, regardless of the form that the gift takes. It also includes those military grants for which a cash disbursement is made.

that balancing items transactions are undertaken to influence the foreign-exchange market. In fact, traditionally, the volume of transactions in balancing items measured the degree of intervention by central banks and official institutions in foreign-exchange markets. This transaction 41 is clearly not for the purpose of affecting the exchange rate but rather for the purpose of earning interest. There have always been some transacitons of this nature included in the balancing items, but their volume was insignificant until OPEC emerged. Since then, the balancing items cannot be used without considerable adjustment as an indicator of official intervention in foreign-exchange markets.

42. (a) Japan draws $600 of its official dollar deposits held in the United States in order to pay an Arabian country for an oil shipment. (b) The Arabian country, the recipient of the dollars, uses the funds to purchase stock in a U.S. petroleum corporation. (This investment represents 20 percent of the stock of the U.S. firm.)

Part (a) results in a decline in U.S. liabilities to official foreigners; it is a use of foreign exchange, a debit (−), recorded at VI.1. Part (b), the Arabian purchase of stock in a U.S. corporation, represents a decline in U.S. assets, a source, and a credit (+). Because it is a stock purchase and represents more than 10 percent ownership, it is recorded — contrary to all other official international agencies and government claims, which are recorded in Part VI under balancing items — as a long-term investment at III.1.

43. (a) An Arab country draws $135 of its official dollar holdings at a U.S. bank (b) to pay for the purchase of common stock in a U.S. corporation. The total purchase amounts to 5 percent of the outstanding stock in the corporation.

Part (a) results in a decline in U.S. liabilities to official foreign institutions; it is a use of foreign exchange, a debit (−) recorded at VI.1. Part (b), the Arabian purchase of stock, is a decline in U.S. assets, a source, and a credit (+). Because it is a portfolio investment, it is classified at VI.1 under balancing items. Prior to 1975, this credit would have been recorded at III.1, but since then it is assumed that stock purchases of less than 10 percent of the total stock outstanding are as liquid an investment as the purchase by foreign governments of bonds or other debt instruments and are classified under VI.1. The debt instruments purchased by foreign governments have always been classified under VI.1, thus affecting the balancing items category, and its meaning, as discussed in 41 above.

44. (a) A Kuwaiti sheik buys vacation homes in California for $180. (b) He pays in dollars which he withdraws from his dollar deposit at a New York commercial bank.

Part (a), as such, will probably never be recorded in the balance of payments, because it is unlikely to be reported to the data collection agencies. Instead, the United States Department of Commerce estimates a quarterly figure for real estate acquired by foreign individuals in the United States. If the estimate is correct, it will include this as well as many similar transactions. This represents a decline in U.S. long-term assets vis-à-vis nonresidents, and, thus, is a source, a credit (+), recorded as direct foreign investment at III.1. Part (b) will most likely be reported by the New York bank to the United States Treasury as a decline in short-term liabilities to foreigners. As such it is a use, a debit (−), recorded at IV.2.

CONCLUDING COMMENTS

The balance of payments is nothing more than a national statement of sources and uses of foreign exchange, comparable to a corporate statement of sources and uses of funds. Each international transaction requires two entries due to the nature of double-entry bookkeeping, and despite the growing complexity of international transactions, the appropriate entries for the most part follow the same principles (rules) that apply to the construction of any standard sources-and-uses-of-funds statement. Four types of transactions, however, require special arbitrary rules: unilateral transfers, allocations of SDRs by the IMF, interest and dividends, and domestically mined gold purchased by the Treasury Department. Discussion and enumeration of examples of these types of transactions appear in transaction 9.

Based on the grounding of exhibit 1, one can more fully appreciate and analyze the implications of the more commonly used and more complex balance-of-payments presentations, such as that in exhibit 2, which is published quarterly in the *Survey of Current Business.*

Finally, a word is in order with respect to the collection of balance-of-payments data. The transactions presented in this paper are realistic. They do take place in the manner described. However, the United States Treasury and the federal reserve banks on behalf of the Treasury, together with the Balance of Payments Division of the Department of Commerce — the organizations responsible for the compilation, classification, and presentation of the data — cannot obtain the data for each individual transaction that takes place during a given

period. Therefore, the data that is eventually published in the U.S. balance of payments is obtained from various sources.[12]

For example, data on merchandise exports and imports are obtained largely from monthly Census Bureau figures which are basically collected for customs purposes and which may therefore differ substantially in valuation, coverage, and timing from the figures that would ideally be best suited for balance-of-payments purposes. Adjustments are made where possible to value exports as free alongside ship (f.a.s.) in the United States and imports as f.a.s. in foreign ports. Tourist expenditures and related figures are obtained from the United States Immigration and Naturalization Service. These figures are in fact estimates based on number of passengers, airfare costs, and average expenditures by tourists. Other data come from relevant government and international agencies and from regular reports filed by financial institutions and multinational firms.

Under the circumstances, total debits and credits rarely match. For instance, it is unlikely that the total figure for merchandise imports (debits) for any one period, obtained from Census data, will be exactly offset by the means of payments (credits) reported by financial institutions. For this and other reasons, the need thus arises for a balancing entry under the heading "errors and omissions" (V.2 in exhibit 1). In recent years, this figure has averaged $6 billion annually, which is approximately 4 percent of total exports, approximately 50 percent of the merchandise trade balance, and from 50 to 100 percent of the official reserve transactions balance.

[12] For the most up-to-date information pertaining to the type and source of data included in the balance of payments, see the *Survey of Current Business* (June 1978), part II. For earlier versions of similar information, see *The Balance of Payments of the U.S., 1949-51,* Supplement to the *Survey of Current Business* (1952); also the Review Committee for Balance of Payments Statistics, *The Balance of Payments Statistics of the United States: A Review and Appraisal* (Washington, D.C.: United States Government Printing Office, 1965), also known as the Bernstein Report; and "The U.S. Balance of Payments: Revised Presentation," *Survey of Current Business* (June 1971).

APPENDIX A.

Tracing the intermediate steps before the ultimate form that part (b) of this transaction assumes in the U.S. balance of payments will clarify some of the mechanics of short-term capital movements between the United States and the rest of the world that are relevant in this instance and for several other transactions that follow. When the U.S. corporation makes the loan to its subsidiary, it gives up cash or demand deposits in its checking account at a bank in the United States. The transaction can be recorded in the form of "T account" (where pluses and minuses represent increases and decreases, respectively, in assets and/or liabilities) as follows:

U.S. Parent Corporation

Cash or deposit	−150
Loan	+150

The foreign subsidiary of this corporation, upon receiving the dollar loan, will have an increase in dollar holdings as well as an increase in loans payable. Subsequently, it will use the holdings to pay for merchandise acquired from a local French supplier. These transactions can be summarized as follows:

Foreign Subsidiary

Dollar holdings	+150	Loans payable	+150
Dollar holdings	−150		
Inventory	+150		

The French supplier, after reducing its inventory by the amount sold to the U.S. subsidiary and obtaining dollars in payment, proceeds to deposit the dollars in a Eurodollar bank, which in this case is a branch of a U.S. bank. The accounts of the French supplier:

French Supplier

Inventory	−150	
Dollar holdings	+150	
Dollar holdings	−150	
Eurodollar deposit	+150	

The Eurodollar bank in France — the U.S. bank's branch in France, which is considered a foreign bank for U.S. balance-of-payments purposes — will receive the Eurodollar deposit from the French supplier, and when these dollars clear, the Eurodollar bank acquires dollar deposits in a U.S. bank, in this case most likely its parent bank. Banks usually call the amounts they hold for their own foreign branches "credit balances" rather than "de-

mand deposits." Thus, the Eurodollar bank in France and the U.S. bank's accounts will be as follows:

Eurodollar Bank in France
(A U.S. Branch)

Credit balance due from parent or home office +150	Eurodollar deposit due French supplier +150

Parent U.S. Bank

	Dollar deposit due to X owner, perhaps the U.S. parent corporation
	Dollar credit balance due to own foreign branch +150 −150

Finally, the balance-of-payments accounts that follow show the only two transactions that ultimately reflect changes in assets and liabilities of U.S. residents vis-à-vis residents of the rest of the world. Namely, the increase in long-term fixed assets or direct foreign investment that emerges from the loan by the parent corporation to the subsidiary in France, and the increase in dollar liabilities to a Eurodollar bank that emerges when the Eurodollar bank acquires dollar deposits:

U.S. Balance of Payments

Direct foreign investment	+150	Liquid liabilities to foreigners	+150

If the U.S. corporation *borrowed* dollars from its subsidiary abroad, the same accounts in the balance of payments as in transaction 46 would be affected, but the debit would be a credit and vice versa.

APPENDIX B.

Before transaction 32 takes place, it can be assumed that the London branch has a \$100 deposit at the U.S. parent bank and that therefore the U.S. parent bank has a \$100 liability due to its London branch. This situation is illustrated above the dotted line in the "T accounts" that follow:

U.S. Parent Bank		London Branch Bank	
	Credit balance in dollars due to London branch +100	Credit balance due from U.S. parent +100	
- - - - -	- - - - -	- - - - -	- - - - -
	Three months' borrowing from London branch +85	Three months' dollar loan to parent +85	
	Credit balance due to London branch −85	Credit balance due from U.S. parent −85	

When transaction 32 occurs, the borrowing U.S. parent bank acquires a three-month \$85 liability due to its London branch. The London branch acquires an \$85 asset in the form of a three-month loan. Since the London branch uses part of its credit balance at its parent bank to make the loan, the branch loses \$85 of that credit balance and concurrently the parent bank credit balance due to its branch is reduced by an equal amount. Therefore, the London branch account will show both the decline in its credit balance at its parent bank and an increase in the three-month loan due from the parent bank. The parent bank's account, on the other hand, will show an increase in a three-month loan liability to the branch and a reduction in its credit balances due to its London branch. These transactions are recorded below the dotted line in the "T accounts" above.

A Study of International Accounting Education in the United States

JANE O. BURNS*

An increasing number of U.S. corporations are operating in multiple environments. During the last twenty years, annual direct foreign investment more than tripled. Currently, approximately 3,500 U.S.-based multinational corporations control over 25,000 foreign affiliates. This is an increase from 2,500 companies controlling 10,000 corporations abroad in the late 1950s. For 200 U.S. companies, income of foreign subsidiaries exceeds 25 percent of total income.[1] Exports also are experiencing dynamic growth. Since the 1950s, total merchandise exports have risen sevenfold to $120 billion in 1977. In fact, "[i]t is difficult to point to a firm of any size which is not involved in or affected by some aspects of international business."[2]

University education began to respond to the growing internationali-

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This study is an extension of the Education Committee, International Accounting Section of the American Accounting Association. The author wishes to express special appreciation to Professor Norlin G. Rueschhoff for his encouragement and guidance in designing the survey instrument used in this research.

[1] American Accounting Association, Committee on International Accounting, "Report of the Committee on International Accounting," *Accounting Review*, Supplement to vol. 48 (1973): 121.

[2] American Assembly of Collegiate Schools of Business, *The Internationalization of the Business School Curriculum* (St. Louis, Mo.: American Assembly of Collegiate Schools of Business, 1979), p. 1.

zation of business in the late 1950s.[3] In 1974, the American Assembly of Collegiate Schools of Business (AACSB) expanded accreditation standards to include an international perspective. With the establishment of a grant from the General Electric Company in 1977, the AACSB began conducting a series of regional workshops

> ...to assist business schools in following various strategies toward the internationalization of the curriculum, which is needed not simply to comply with the AACSB standards, but also to prepare their graduates for the business world they will enter.[4]

Two different approaches to internationalizing the business curriculum have developed. One approach is to treat international business as a single discipline, requiring the establishment of separate multidisciplinary courses. A second outlook broadens existing academic areas so that discussions of domestic topics are expanded to include international aspects.

International business studies and more specialized international finance subjects commonly include accounting topics. However, considerable support exists for expanding the coverage of international accounting material.[5] At the 1978 AACSB Internationalizing the Accounting Curriculum sessions, "[i]t was the consensus of the participants that an international accounting course would have a relatively high priority in today's accounting environment."[6] In conclusion, the group stated that international accounting instruction should be required at the doctoral level for all accounting majors.[7] Two American Accounting Association (AAA) Committee Reports indicate separate courses in international taxation also may be useful.[8]

Two surveys of international business courses[9] revealed that many more schools offered separate courses in international finance, inter-

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[3] Schuyler F. Otteson, ed., *Internationalizing the Traditional Business Curriculum,* International Business Research Series Number 1 (Bloomington, Ind.: Bureau of Business Research, Graduate School of Business, Indiana University, 1968), p. 4.

[4] AACSB, *Internationalization,* p. i.

[5] Ibid., p. 24; James D. Goodnow, "International Business in the MBA and BBA Core Program," *Journal of International Business Studies* (Fall 1973): 81; and Gerhard G. Mueller and Vernon Zimmerman, "Internationalization of the Accounting Curriculum," in Otteson, *Business Curriculum,* pp. 53-56.

[6] AACSB, *Internationalization,* pp. 24-25.

[7] Ibid., p. 26.

[8] American Accounting Association, Committee on International Accounting, "Report" (1973), p. 166; and American Accounting Association, Committee on International Accounting, "Report of the Committee on International Accounting," *Accounting Review,* Supplement to vol. 49 (1974): 268.

[9] Vern Terpstra, *University Education for International Business* (Benton Har-

national marketing, and international management than they did in international accounting (see exhibit 1). Further, many schools had more than one course in each of the disciplines except accounting. No school provided students with more than one international accounting course.

Exhibit 1. Surveys of International Business Courses

Study	*Total schools*	*International finance*	*International marketing*	*International management*	*International accounting*
1969[a]	95	40	50	65	17
1974[b]	272	133	182	121	35

[a] The 1969 study includes U.S. schools only (Terpstra, *University Education*, pp. 188-89).
[b] The 1974 study includes both U.S. and non-U.S. schools (Daniels and Radebaugh, *Curriculum Survey*, pp. 154-66).

While the ideal may be to integrate international accounting concepts into existing accounting courses, numerous constraints prevent this approach. First, few faculty members are prepared to discuss international aspects of financial, managerial, auditing, information systems, or tax accounting. Second, current textbooks rarely include such information except for the occasional text with a separate chapter on international aspects of accounting. Third, supplementary readings are inadequate for many topical areas.

Since it may be unrealistic to expect existing courses to incorporate many international accounting aspects, some schools are turning to a separate international accounting course. Typically, the course attracts a small percentage of eligible students and may be considered a burden by some understaffed accounting departments. International accounting generally is taught by an enthusiastic individual whose preparation time far exceeds that required for most other subjects. As a result, exchange of ideas and syllabi in international accounting becomes considerably more important than for other areas. To facilitate such exchanges, the Education Committee of the International Accounting Section of the AAA annually gathers syllabi from its members for distribution through the AAA Syllabus Exchange and for publication in *Accounting Trends*.[10] This study is in response to needs ex-

bor, Mich.: Association for Education in International Business, 1969); and John D. Daniels and Lee H. Radebaugh, *International Business Curriculum Survey* (Academy of International Business, 1974).
[10] Thomas J. Burns, ed., *Accounting Trends XII* (New York: McGraw-Hill, 1978).

pressed by faculty members teaching international accounting and by those whose schools desire to offer such a course.

To obtain information about existing and anticipated international accounting courses, a questionnaire was mailed to academic members of the International Accounting Section of the AAA (Group I) and to departmental chairpersons of all other AACSB schools with ten or more professorial-rank faculty members (Group II). There were 62 schools in Group I and 89 in Group II for a total of 151 schools.

Replies were received from 117 (77.5 percent) of those contacted (see exhibit 2). Thirty-six of the 117 schools have one international

Exhibit 2. Responses to the Questionnaire

Does your school have one or more international accounting courses?	*Number of schools*	*Percentage of schools*	
Yes	37	24.5	31.6
No, but expect to add one in next three years	24	15.9	20.5
No and do not expect to add one in next three years	56	37.1	47.9
Subtotal	117	77.5	100.0
No response	34	22.5	
Total	151	100.0	

accounting course, and 1 has three. Twenty-four respondents expect to add international accounting to their curriculum within the next three years. This will be a first course in international accounting for 23 schools and a second course for 1 school. Four respondents wrote that they would like to add the subject to their curriculum but do not have international accounting faculty resources to do so. Additionally, 2 schools with a course and 6 expecting to add one within the next three years do not list any faculty members with an interest in teaching international accounting. Although Fantl also notes that some schools have difficulty obtaining faculty to teach international accounting,[11] the problem apparently is one of logistics rather than availability. Of the 117 responding schools, 72 list 109 faculty members

[11] Irving L. Fantl, "International Accounting: A Curricular Challenge," *Collegiate News and Views* (Winter 1971): 16.

with an interest in teaching international accounting. Twenty of the 72 do not expect to offer a course in international accounting.

INTERNATIONAL ACCOUNTING TOPICS

To obtain information on what international accounting topics should be included in the curriculum, three studies sought opinions of businessmen.

Tarleton's questionnaire listed thirty topics.[12] Only two were accounting subjects. Based on mean values derived from a scale of one to five, international financial reporting ranked fourth and had the smallest standard deviation. International accounting practices ranked eighth and had the fifth smallest standard deviation. Although not among the thirty topics, international taxation was added to the list by several participants.

Respondents to Patrick's questionnaire ranked accounting as the third most important international business subject on a list of five.[13] Accounting ranked after finance and economics but before marketing and management. Respondents rated international taxation as the most important international business topic. Two other areas listed as very important were accounting problems in foreign operations and international cash management.

Clay's study, an unstructured survey of potential employers, sought information on what should be included in an international accounting course.[14] He determined the four most important international accounting subjects to be conceptual differences in international practice, currency translation, taxation, and consolidations. Respondents thought the course should include information about social, political, and economic factors affecting international business.

Several authors discuss topics that should be included in an international accounting course. Suggestions by Seidler include comparisons of accounting principles, taxation, inflation accounting, financial reporting, and differing objectives of accounting.[15] Brummet lists information systems, social and human resource accounting, governmental

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[12] Jesse S. Tarleton, "Recommended Courses in International Business for Graduate Business Students," *Journal of Business* (October 1977): 438-47.
[13] Thomas Patrick, "Attitudes of Alumni and Corporations toward International Business Education," *Journal of International Business Studies* (Spring/Summer 1978): 109-11.
[14] Alvin A. Clay, "Undergraduate International Accounting Education," *International Journal of Accounting* (Fall 1975): 187-92.
[15] Lee J. Seidler, "International Accounting — The Ultimate Theory Course," *Accounting Review* (October 1967): 775-79.

accounting, budgeting, national income and product accounts, input-output analysis, and comparative accounting practices.[16] Topics important to Mueller include differences in accounting concepts, currency translation, consolidations, international accounting and auditing standards, financial reporting, inflation accounting, and the relationship between accounting and economic development of countries.[17]

While all of the foregoing articles recommend possible subjects to be included in an international accounting course, none furnishes a complete list or indicates how time should be allocated among the topics.

In this study, respondents were asked to estimate the percentage of all assignment time devoted to sixteen specific topics plus any additional topics not listed (see exhibit 3). Ranked in mean order, respondents report they allocate a majority of their time to (1) comparative accounting principles; (2) Financial Accounting Standards Board Statement No. 8 and foreign-currency translation; (3) transfer pricing, foreign tax credit, and taxation of foreign source income; (4) inflation accounting; and (5) financial reporting and disclosure. In order of decreasing time allocation, other important topics are (6) cash management and foreign-exchange risk management; (7) international accounting standards; (8) international accounting history and background information; (9) nonaccounting business topics, including introductory background information; (10) consolidations; (11) other topics relating to taxation; (12) other topics relating to management accounting; (13) other topics relating to auditing; (14) performance evaluation; (15) other topics relating to social accounting; (16) other topics relating to financial accounting; and (17) other topics.

Two of the thirty-nine courses are specialty courses; one concentrates on taxation, the other on international social accounting. When these two are omitted from the analysis, the tax-related topic drops from third to fifth, and social accounting drops from fifteenth to seventeenth.

Generally, it is assumed that U.S. multinationals approach international activities from a U.S. perspective rather than from a global one. Respondents indicate that U.S. international accounting education adopts a similar viewpoint. A majority (54.3 percent) of all classroom time is allocated to discussing international topics from the perspective of U.S. multinational corporations (see exhibit 4). Study of these

[16] R. Lee Brummet, "Internationalism and the Future of Accounting Education," *International Journal of Accounting* (Fall 1975): 162-64.

[17] Gerhard G. Mueller, "Whys and Hows of International Accounting," *Accounting Review* (April 1965): 392-93.

Exhibit 3. Allocation of Time (in Percents) to International Accounting by Topic[a]

Rank by mean	*Topic*	*Mean*	*Standard deviation*	*Range*
1.	Comparative accounting principles (D)[b]	15.5	12.4	0-50
2.	FASB Statement No. 8 and foreign-currency translation (F)	10.9	5.9	0-30
3.	Transfer pricing, foreign tax credit, and taxation of foreign source income (K)	9.5	15.4	0-95
(5)[c]		(7.1)[c]	(4.8)[c]	(0-20)[c]
4.	Inflation accounting (H)	7.5	5.2	0-20
5.	Financial reporting and disclosure (G)	7.4	5.0	0-20
6.	Cash management and foreign-exchange management (C)	6.0	5.2	0-20
7.	International accounting standards (I)	5.8	4.6	0-20
8.	International accounting history and background information (B)	4.9	5.3	0-30
9.	Nonaccounting business topics, including introductory background information (A)	4.9	5.2	0-20
10.	Consolidations (E)	4.8	4.9	0-20
11.	Other topics relating to taxation (O)	4.3	5.6	0-20
12.	Other topics relating to management accounting (N)	4.1	7.6	0-50
13.	Other topics relating to auditing (L)	3.7	4.1	0-20
14.	Performance evaluation (J)	3.6	4.1	0-10
15.	Other topics relating to social accounting (P)	3.2	11.7	0-70
(17)[d]		(1.3)[d]	(2.6)[d]	(0-10)[d]
16.	Other topics relating to financial accounting (M)	2.1	3.6	0-10
17.	Other topics (Q)	1.8	3.9	0-20

[a] Calculations are based on thirty-six completed questionnaires since information was not reported for three of the thirty-nine courses.
[b] The letter in parentheses following each topic indicates the order in which the topic appeared on the questionnaire.
[c] Calculations are based on thirty-five courses after deleting one international taxation course.
[d] Calculations are based on thirty-five courses after deleting one international social accounting course.

topics as they relate to the European Economic Community is a distant second (18.6 percent). Other industrial nations are discussed 11.3 percent of the time. Although emphasized by a few, coverage of nonindustrial, socialist, and Communist countries is negligible for most respondents.

Exhibit 4. Allocation of Time (in Percent) of International Accounting by Economic Category[a]

Rank by mean	*Category*	*Mean[b]*	*Standard deviation*	*Range*
1.	U.S.-based multinational corporations (A)[c]	54.3	30.7	0-100
2.	EEC countries (B)	18.6	15.1	0-50
3.	Industrial nations not included in the EEC (C)	11.3	14.2	0-75
4.	Nonindustrial nations (D)	8.6	8.8	0-30
5.	Other (E)			
	All multinational corporations	5.3	19.6	0-100
	Socialist and Communist countries	3.1	16.7	0-100
	Miscellaneous	1.9	5.4	0-22

[a] Calculations are based on thirty-six completed questionnaires since information was not reported for three of the thirty-nine courses.
[b] Some materials overlap; therefore, mean values exceed 100 percent.
[c] The letter in parentheses following each category indicates the order in which the category appeared on the questionnaire.

GRADUATE VERSUS UNDERGRADUATE

Many authors support internationalization of the entire accounting curriculum.[18] Since no distinction is made, it appears they believe that internationalization should occur at both graduate and undergraduate levels. When these authors discuss a separate international accounting course, a distinction is made between graduate and undergraduate levels. Seemingly in conflict with the argument for including international aspects in existing courses at all levels, many emphasize separate courses available solely to graduate students.[19] In contrast, Rueschhoff

[18] American Accounting Association, "Report" (1973), p. 166; American Accounting Association, "International Accounting," pp. 276-78; Mueller, "Whys and Hows," p. 391; Lee H. Radebaugh, "Internationalizing the Accounting and Finance Curricula," in Richard N. Farmer, ed., *Multinational Firm Strategies,* vol. 2, (Bloomington, Ind.: Indiana University Division of Research, 1975), p. 90; and Norlin G. Rueschhoff, "The Undergraduate International Accounting Course," *Accounting Review* (October 1972), pp. 833-36.

[19] American Accounting Association, "International Accounting," p. 251; Brum-

argues that the future of international accounting education is at the undergraduate level.[20] The 1977-78 Education Committee, International Accounting Section of the AAA, recommended (1) that one of the first two undergraduate accounting courses should include an introduction to international accounting, (2) that a separate international accounting course should be offered as an elective to undergraduates, and (3) that an option to major in international accounting or international business should be available to graduate students.[21]

Of the thirty-nine courses included in this study, twenty-six are for graduate students, seven are for undergraduate students, and six are available to both graduate and undergraduate students. While twenty-four schools are in the process of establishing an international accounting course, only eight are sufficiently organized to allow completion of the questionnaire. Of these eight courses, six will be offered at the graduate level and two at the undergraduate level (see exhibit 5).

Exhibit 5. Graduate vs. Undergraduate

Does your school have one or more international accounting courses?	*Graduate*		*Under-graduate*		*Graduate and under-graduate*		*Total*[a]	
	No.	*Percent*	*No.*	*Percent*	*No.*	*Percent*	*No.*	*Percent*
Yes	26	66.7	7	17.9	6	15.4	39	100
No, but expect to add one in next three years	6	75	2	25	0	0	8	100

[a] The responses include thirty-nine courses offered at thirty-seven schools.

A majority (70 percent) of the thirty-nine international accounting courses have three semester hours credit or the equivalent. Annual class enrollments range from seven to ninety students. The mean for all courses is twenty-two students. Six of the courses are offered at least twice a year, twenty-two once a year, and eleven are offered less often. Of the eight proposed courses, two are expected to be offered at least twice a year, three once a year, and three will be offered less often (see

met, "Internationalism," p. 164; Mueller, "Whys and Hows," p. 392; Mueller and Zimmerman, "Accounting Curriculum," p. 55; and Radebaugh, "Accounting and Finance Curricula," p. 88.

[20] Rueschhoff, "International Accounting," pp. 833-35.

[21] American Accounting Association, International Section, Education Committee, "The Internationalization of Accounting Curriculum" (1978), p. 2.

exhibit 6). A majority (56.4 percent) of the courses are taught in the spring term. Although some textbooks are in use, most syllabi contain lengthy lists of supplementary readings.

Exhibit 6. Frequency of Course Offerings

Does your school have one or more international accounting courses?	*Two or more times a year*		*Once a year*		*Less than once a year*		*Total*[a]	
	No.	*Percent*	*No.*	*Percent*	*No.*	*Percent*	*No.*	*Percent*
Yes	6	15.4	22	56.4	11	28.2	39	100
No, but expect to add one in next three years	2	25	3	37.5	3	37.5	8	100

[a] The responses include thirty-nine courses offered at thirty-seven schools.

CONCLUSIONS

Compared to most accounting subjects, international accounting is a new area. If a faculty decides this material should be included in the curriculum, several additional questions must be considered. Should international concepts be integrated with existing subjects or should a separate course be established? If the decision is to integrate, how will this be accomplished? Should each faculty member be responsible for the method utilized in each class? Should a committee identify topics to be included in each course? Should a committee develop supplementary reading lists? How can noninternational faculty members become informed?

If a separate course is chosen, different questions must be answered. Should it be available to graduate students, undergraduate students, or a combination of the two? Should enrollments be limited to students who are accounting majors, who have strong accounting backgrounds, who have some international background, or to all interested students? How often should the course be offered?

In addition to departmental level questions, each faculty member involved must decide on the best approach to the subject, the text and supplementary readings, the relevant topics, and how much time should be allocated to each topic. Such questions and decisions seem endless. But dedicated international accounting faculty members argue for

internationalizing the curriculum and believe the rewards outweigh the difficulties.

Along with this study, the International Accounting Section of the AAA has several working committees to help schools internationalize accounting programs. In particular, the 1978-79 Education Committee is collecting international accounting syllabi and preparing topical reading lists to be used as supplements for financial, managerial, auditing, information systems, and tax accounting courses. Section committees also are concentrating on promoting research in international accounting, providing communication channels with organizations relevant to international accounting, establishing continuing education programs, and encouraging faculty exchange programs with universities abroad. Much remains to be done, but it is an exciting and important challenge.

INSTRUCTIONS TO AUTHORS

All manuscripts submitted for consideration should be typed on 8½ x 11″ paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

HEADINGS

All major headings within the manuscript should be in capital letters. They should not be numbered. Subheadings should be in capital and lower case letters on a separate line beginning at the left margin. If third-level headings are used, they should begin at the left margin and should end with a period. The text will follow on the same line immediately.

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Each exhibit should be titled and numbered. A textual reference should be made to each exhibit. It would be helpful if the author would indicate by marginal notation where each exhibit should be placed. These instructions will be followed as printing practices allow.

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Footnotes should be numbered consecutively throughout the manuscript with superscript arabic numerals. Citations should not be made in brackets in the text. Mathematical symbols should not have footnote numbers attached. Entries for books should include author's name, title of the work underlined, and, in parentheses, place of publication, name of publisher, and date of publication. For journals, author's name, title of article within quotation marks, title of journal underlined, date of issue in parentheses, and page numbers should be included. Please see the following examples.

[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

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Manuscripts may include a bibliography at the end of the paper. If so, such references are not to be limited to those references cited in the text. Each entry should contain all data necessary for identification. Citations should be arranged in alphabetical order necessary for identification. Multiple works by

the same author should be listed according to chronological order of publication. Examples are listed below.

Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure — The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice Hall, 1973.

MATHEMATICAL NOTATION

Mathematical notation should be stated as simply as possible so as to simplify typesetting. Alignment should clearly indicate superscripts and subscripts. Equations which are numbered should have the numbers in parentheses flush with the left-hand margin.

Journal of Business Finance and Accounting

Summer 1979 Volume 6, No. 2

Editor: *J. R. Perrin,* University of Warwick, Coventry, U.K.

Contents

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THE QUARTERLY REVIEW OF ECONOMICS AND BUSINESS

Vol. 19 | Winter 1979 | No. 4

ARTICLES

THE QUARTERLY REVIEW OF ECONOMICS AND BUSINESS is published by the Bureau of Economic and Business Research, College of Commerce and Business Administration, University of Illinois. Subscription rates are $9.00 a year for individuals and $17.00 a year for organizations and associations. The single-copy price is $4.00. Manuscripts and communications for the editors and business correspondence should be addressed to the QUARTERLY REVIEW OF ECONOMICS AND BUSINESS, 428 Commerce West, University of Illinois, Urbana, Illinois 61801.

Accounting in the Golden Age of Greece

George J. Costouros

Contemporary accounting theory and practice have been shaped by diverse economic and political influences. The increasing social importance of the accounting profession is indicated in many ways. In the United States, recent legislative studies by both houses of the Congress (the Cohen and Moss Reports) have examined critically the adequacy of the accounting profession in the United States and its present structure to service adequately its several publics. In Great Britain, the problem of severe inflation and the perceived inadequacies of the existing accounting reporting theory and practice were extensively studied by the Royal Commission and its findings given in the Sandilands Report.

An understanding of the origins and subsequent development of accounting theory and practice should be of vital importance in our attempts to assess present deficiencies in accounting and to identify promising changes in accounting services to its constituencies in the future. An important part of this understanding can be obtained from thorough studies of the development of accounting in specific important historical periods.

The Center considers the exploration reported in *The Role of Accounting in the Economic Development of England 1500-1750,* by James O. Winjum, as a particularly useful study for the long-term evaluation of accounting development. We believe that Professor Costouros has added a concise and useful work to this larger continuing study of accounting development. He has examined basic goals and applications of accounting in one of history's pivotal periods. We believe this is a useful addition to the small but valuable work concerned with the international development of accounting thought.

Accounting for Common Costs
and
A Bibliography of Cost Accounting: Its Origins and Development to 1914

M. C. Wells

The Center for International Education and Research in Accounting has as one of its major purposes the publication of scholarly contributions in the field of international accounting. With the publication of this comprehensive study by Professor Murray C. Wells, I believe the Center has published a seminal work.

Professor Wells' scholarship is thorough and comprehensive. He has turned his efforts to one of the most difficult problems in accounting. His particular area of concern is the important one of allocating "common overhead cost of products." Professor Wells has completed an exhaustive study of the literature in this area. We believe the reader will be given a useful explanation of the historical background and present discussion of accounting practice relating to overhead allocations.

In addition to the monograph, Professor Wells has also compiled a comprehensive bibliography of this topic. We believe it is the most comprehensive yet compiled and should serve accounting scholars well in the future. The bibliography is published in a companion volume and is an integral part of the research.

Copies will be available from the Center for International Education and Research in Accounting, 320 Commerce Building (West), Box 109, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801 U.S.A. (Price: $8.00 each or $14.00 per set.)

The Impact of Inflation on Accounting: A Global View

If one examines the long history of accounting, a focal point for continuing theory debate quite clearly has been in the area of valuation. More specifically, from accounting's very origins, the question of data in the accounts has been concerned with the original cost versus some other values. In modern times and for varying reasons given by many commentators, the question of recording values in the accounts has become more acute. In recognition of this growing debate which has a significant international impact, the Center planned a seminar with the theme, *The Impact of Inflation on Accounting: A Global View.*

In 1978 we were in a period of continued extensive debate concerning the impact of inflation on accounting data. This is not a new discussion but perhaps it has become more intense or viewed more seriously than earlier. The many cylical economic periods centuries ago in Great Britain and Europe had their impact upon accounting. The French company laws, the German balance sheet laws, and the English Company Acts are all manifestations of attempts to legislate appropriate action where accounting data faces the disorganization or stress caused by fluctuating market valuations. It seemed most appropriate to take a new perspective in 1978 of the international debate centering on the impact of inflation on accounting. We were pleased to have extraordinarily capable speakers to talk on this topic. Dr. Sprouse of the Financial Accounting Standards Board typified the type of scholar who gave presentations for a seminar of this type. Specific individual presentations in the seminar dealt with current concerns and current proposals in the inflation area.

We do not presume that the debate of whether accounting data should be adjusted or should reflect current market valuations has now been settled. We feel the problem is international in its importance and believe the pressures of inflation increase the pressure on accounting to attempt to provide a theory that will accommodate the specific reporting needs of a period of inflation. These pressures seem to vary directly with the rate of inflation. In the international area we have had a number of specific cases where countries have experienced inflationary rates of such magnitude that the original cost framework accounting data obviously had to be supplemented or adjusted.

We also attempted in the *Index on Inflation* to prepare a comprehensive bibliography on the inflation and accounting area of articles written during the past five years. We hope it will be useful to provide both specific reference to key works and also to indicate the pervasiveness of various themes within this overall area of debate.

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V. K. Zimmerman, *Director*

THE INTERNATIONAL JOURNAL OF ACCOUNTING

EDUCATION AND RESEARCH

Volume 15 · Number 2 · Spring 1980

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The International Journal of Accounting *Education and Research* is published semiannually, spring and fall, by the Center for International Education and Research in Accounting, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign. Subscription rates are $10.00 per year. Single-copy price is $5.00. Copies of prior issues are still available.

Manuscripts and communications for the editor and business correspondence should be addressed to **The International Journal of Accounting** *Education and Research,* 320 Commerce Building (West), University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

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Contents

Harmonization of Accounting within the European Communities: The Fourth Directive on Company Law

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The pages of this journal have previously carried articles concerning accounting differences between the United States and various European countries.[1] Also, harmonization within the European Economic Community (EEC) has been discussed.[2] However, much has happened in the last few years which merits additional comment. This article summarizes the main causes of present national differences in accounting, discusses the purposes of harmonization, examines the EEC proposals for harmonization, and, finally, outlines the British government's response, particularly to the EEC's Fourth Directive on Company Law of July 1978.

CAUSES OF DIFFERENCES

One basic cause of international differences in accounting is differing legal systems. The common law system of England and of most states in the United States involves a limited number of statutes supplemented by a large volume of case law. However, continental legal systems, such as those of France and Germany, are based on a civil code which is prescriptive in a much more detailed manner than is the

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[1]N. M. Bedford and J. P. Gautier, "An International Analytical Comparison of the Structure and Content of Annual Reports in the EEC, Switzerland and the United States," *International Journal of Accounting* (Spring 1974); and P. E. M. Standish, "Accounting Responses to Inflation in the EEC," *International Journal of Accounting* (Fall 1975).

[2]R. A. Burnett, "The Harmonization of Accounting Principles in the Member Countries of the EEC," *International Journal of Accounting* (Fall 1975).

common law system. In such countries, the law precisely prescribes rules of asset valuation, income measurement, and the format of financial statements. Thus, there is little room for the "fair" presentation which relies on more flexible rules and on an accounting profession trained and permitted to use judgment. Another reason for the comparative lack of importance of "fair" presentation in French and German accounting is that there are only approximately 900 listed corporations in France and 500 in West Germany, compared to more than 3,000 in the United Kingdom and 2,500 in the United States.[3] In addition, much of the stock in the relatively few listed corporations in France and Germany is controlled by banks, governments, or families, all of whom have internal sources of information. Consequently, the remaining small number of private stockholders means a reduced need for the "fair" presentation.

Traditionally, accounting in France and Germany has been performed primarily for the purposes of the revenue authorities and for government economic and statistical agencies. To a large extent, the profit amounts are the same for published accounting reports and taxation purposes, and auditing is mainly concerned with ensuring that the law has been obeyed and that taxable profit is correct. Partly for these reasons, the accounting profession in France and Germany is much smaller and performs different tasks from those of the profession in the United States or the United Kingdom.[4]

The remarks concerning France and Germany apply, broadly speaking, to other continental European countries except for the Netherlands, where accounting and auditing are performed in a way which approximates the Anglo-Saxon approach.[5] It will be useful to recall this major difference between the accounting practices of continental countries and the Anglo-Saxon world (plus the Netherlands) for the next section of the article.

MAIN DIFFERENCES

One fundamental difference in approach between continental and Anglo-Saxon accounting has already been mentioned: the importance of "fair" presentation in Anglo-Saxon accounting developed in part from the need to provide useful and comparable information to outside stockholders. Continental accounting involves many rigid

[3] *New York Stock Exchange Fact Book* (1977). See also M. Lafferty, *Accounting in Europe* (London: Woodhead-Faulkner, 1975).

[4] C. W. Nobes, "Some Topics in International Accounting," *International Accountant* (February 1978 and April 1978).

[5] J. H. Beeny and J. G. Chastney, *European Financial Reporting—Netherlands* (London: ICAEW, 1978).

rules and the operation of "uniform accounting" which are useful for government and tax officials. The rigid rules are those established mainly by revenue law in France and by company law in Germany, for example, standardized formats, prescribed rates of depreciation, and rules of asset valuation. "Uniform Accounting," as described by Mueller,[6] for example, consists of detailed charts of accounts and many standardized definitions and measurement rules. In France, these are contained in the Plan Comptable Général (General Accounting Plan) which is compulsory for companies and is supervised by a government body.[7]

A further important difference is the degree of conservatism. The strong influence of law and the importance of bankers and governments as controllers of corporations help to explain the prevailing conservatism in continental accounting. Manifestations of this include the general illegality of revaluing fixed assets; the compulsory increase of legal reserves from profit, typically 5 percent of yearly profit until reserves reach 10 percent of capital; and the prevalence of other reserves and allowances for price rises, risks, and possible losses in value. In Germany, for example, although income figures are not rounded to the nearest thousand as might be the case in the United States, they are often declared as round numbers ending in several zeros, making it clear that profit is a contrived figure and that reserves have been manipulated. Beeny uses the examples of several German companies, such as BASF, Salzgitten, and Feldmühle, to illustrate this. For the information of investors and analysts, some German companies make more realistic estimates of income which may be many times higher.[8]

A third important difference has already been mentioned, that is, that continental corporate accounts must reflect any charges against taxable income in the accounting calculations. For example, although continental depreciation charges allowed for tax purposes are usually based on the lengths of useful lives of assets, there are occasions when a depreciation charge in the financial accounts is above what is "reasonable," in order to take advantage of accelerated tax allowances. In addition, tax regulations allow a variety of write offs and special reserves which must be reflected in the financial accounts if they are to be allowed for tax.

Another important difference from the point of view of interpreta-

[6]G. G. Mueller, *International Accounting* (New York: Macmillan, 1967), pt. 1.

[7]J. H. Beeny, *European Financial Reporting—France* (London: ICAEW, 1976), ch. 4; and Lafferty, *Accounting in Europe*, ch. 2.

[8]J. H. Beeny, *European Financial Reporting—Germany* (London: ICAEW, 1976), ch. 4.

tion of published accounts concerns consolidation.[9] Many French and most Italian groups do not provide consolidated financial statements. Those which do consolidate use a variety of practices, including variants of the parent company and equity methods, and completely different methods such as proportional consolidation. This situation results from a lack of legislation in the area and the absence of a strong accounting profession capable of formulating and enforcing its own rules. German groups are required by law to consolidate, but this extends only to domestic subsidiaries. There is no consolidation for foreign subsidiaries (unless the group voluntarily prepares additional statements) or for any associated companies (see following sections and note 16).

These differences mean that great care must be used in comparing the accounts of, for example, Standard Oil, British Petroleum, and Total Oil (France). Such international comparisons between companies will usually involve the use of consolidated accounts. To a large extent, it is not possible to adjust accurately for the differences in consolidation techniques using only the information in company accounts from different countries. Clearly, the harmonization of consolidation practices is very important. This is considered in a later section.

Publication requirements also vary by country. Those of the United Kingdom and Ireland are unusual in Europe because they do not exempt small companies from any publication of audit requirements. This will probably be remedied when the Fourth Directive is brought into national law, as discussed later.

Finally, the positions of the professions and governments throughout the EEC toward inflation accounting[10] vary widely. The British government is in favor of inflation accounting, but the profession finds it difficult to agree upon an acceptable version; some Dutch companies have been voluntarily using current value accounting for decades; the French government has recently rejected a proposal concerning supplementary current purchasing-power information; and the German government was so against inflation accounting for Germany and any other EEC country that approval of the Fourth Directive (which allows governments to introduce it) was placed in jeopardy. As yet, no government or professional body in the EEC has promulgated any standard practice in this area. This might be an area

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[9]R. H. Parker, "Concepts of Consolidation in the EEC," *Accountancy* (February 1977).

[10]Following common (though inexact) practice, the expression "inflation accounting" is used to include systems which adjust for specific price changes as well as general inflation.

which will cause even greater problems of harmonization. However, it is expected that a standard (SSAP 16) on supplementary current cost accounting will be issued in the United Kingdom March 31, 1980.

THE PURPOSES OF HARMONIZATION

Harmonization of accounting is a process whereby the size and number of differences in practice between countries are reduced. It does not imply complete standardization that would require uniform and rigid rules throughout the EEC. General arguments for the international harmonization of accounting practices[11] include the usefulness that this would have for investors, financial analysts, and credit agencies (for example, the World Bank) in assessing and comparing the performance and prospects of companies from different countries. Multinational corporations and international accounting firms would gain from having financial statements based on similar systems throughout the world to audit, consolidate, compare, and so on. Tax authorities would find it easier to assess foreign companies. Also governments, economic and statistical agencies, and trade unions would be better able to collect information and monitor the activities of corporations.

On a worldwide basis, the International Accounting Standards Committee (IASC), the United Nations, and the Organization for Economic Cooperation and Development (OECD)[12] are among bodies interested in the harmonization of accounting for the reasons mentioned earlier and, also, in the case of the latter two bodies, to enable greater control of multinational corporations.

Within the EEC, in particular, harmonization of corporate accounting and taxation is an aim of the commission due to the objectives of the Treaty of Rome. These include the promotion of the free movement of persons, capital, goods, and services throughout the EEC. The free movement of capital requires the supply of reliable, homogeneous accounting information from EEC companies. This implies the harmonization of accounting. The free movement of persons and capital also requires the harmonization of direct taxation. The commission, therefore, intends that companies of the same form which are in competition within the EEC will be subject to the same laws, taxes, accounting, and disclosure requirements.

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[11]International Centre for Research in Accounting, *International Financial Reporting Standards*, Occasional Paper No. 13 (Lancaster: ICRA, 1977).

[12]J. P. Cummings and M. N. Chetkovich, "World Accounting Enters a New Era," *Journal of Accountancy* (April 1978).

HARMONIZATION OF ACCOUNTING

Although the professional bodies of many countries in the EEC belong to the IASC, harmonization in the EEC will not be due to IASC's work, because company and revenue law in such countries as France and Germany is sufficiently weak that accounting standards can have little power in those countries. Therefore, harmonization results from new company law brought into effect as a result of EEC directives. The present list of relevant directives and draft directives is shown in exhibit 1. The most important directives for accounting are the fourth and the seventh (still in draft).

Exhibit 1. Directives Relevant to Corporate Accounting

Directives on Company Law	*Draft dates*	*Date approved*	*Purpose*
First	1964	1968	Ultra vires rules
Second	1970, 1972	1976	Separation of private from public companies, minimum capital, limitation on distributions and interim dividends
Third	1970, 1973, 1975	1978	Mergers
Fourth	1971, 1974	1978	Formats and rules of accounting
Fifth	1972		Structure, management, and audit of companies
Sixth	1972, 1975		Prospectuses
Seventh	1976, 1978		Group accounts
Eighth	1978		Qualifications and work of auditors
Regulations on Company Law			
Societas Europea	1970, 1975		Proposals for a European company subject to EEC laws
European cooperation grouping	1973, 1978		Proposals for a business form facilitating multinational joint ventures
Directives on corporate taxation			
Company taxation	1975		Harmonization of systems of company taxation and of withholding taxes
Collective investment institutions	1978		Extends the 1975 directive to these special companies

The Fourth Directive on Company Law was approved by the Council of Ministers of the EEC in July 1978. The first stage that the directive passes through is translation and checking by the "jurists and linguists" group. An example of the problems faced during this stage is that the British prefer the word "prudence" to the rather stricter "conservatism." However, the obvious translation of "conservatism" into French would be the French word *prudence*. The directive must then be passed into law by the member states within two years. There is a further period of eighteen months for the national legislation to come into force.

The original 1971 draft of the Fourth Directive and its much amended successor of 1974 which followed the accession of the United Kindgom, Denmark, and Ireland have been discussed elsewhere.[13] The gradual move away from the domination of Franco-German, legalistic, uniform, conservative, creditor- and tax-based accounting continued between 1974 and 1978. The governments of the United Kingdom, the Netherlands, and Ireland successfully proposed that the "fair" presentation notion should predominate. Support for this view came from the Groupe d'Etudes (Accountants' Study Group, representing professional accountancy bodies in the EEC).

The directive applies to all limited companies (and limited partnerships), except banks and insurance companies for which there will be special directives. It proposes minimum standards only. For example, many member states of the EEC will require statements of the source and application of funds, even though the Fourth Directive does not. The directive's main concerns are valuation rules, formats, and contents of published financial statements, and publication requirements. Consolidation is left to the proposed Seventh Directive.

Valuation will be performed using the historical cost basis. The conventions of the going concern, prudence, accruals, and consistency will be applied. The explicit statement of these conventions has been a change in the drafting. It parallels British and U.S. accounting standards.[14] There are detailed rules concerning the valuations of inventories, measurement of depreciation, and other similar matters. In general, these will not necessitate changes in practice. However, there is a requirement to write off purchased goodwill over five years (or a longer period, up to its useful economic life, if allowed by member states). This may change British practice. Also, exceptional

[13]Burnett, "Harmonization."

[14]Accounting Standards Committee, *Disclosure of Accounting Policies: SSAP 2* (U.K. Accountancy Bodies, 1972); and Accounting Principles Board, *Basic Concepts and Accounting Principles, APB Statement No. 4* (U.K. Accountancy Bodies, 1970).

value adjustments must be separately disclosed. This includes any accelerated depreciation shown in the financial statements because this is necessary if it is to be allowed for tax purposes. This will lead to useful additional information in French and German financial statements. Similarly, the importance of secret reserves is diminished because all changes in valuation must pass through the income statement.

One of the great problems encountered when trying to reach agreement among the member states of the EEC was inflation accounting. The different governmental attitudes have already been mentioned. The Fourth Directive compromises by allowing member states to ban, permit, or require inflation accounting. It may be as a replacement or as a supplement to historical cost accounting. No system is specified. In all cases, historical cost balance-sheet figures must still be disclosed. Thus, the directive allows the development of financial statements with dual sets of accounts, with different versions of inflation accounting used in different member states. This casts serious doubt on whether "reliable, homogeneous accounting information" will be available throughout the EEC.

Published financial statements in the United Kingdom and the Netherlands (as in the United States) show very little standardization, whereas most continental European countries impose a considerable measure of uniformity. The Fourth Directive will force greater uniformity on the United Kingdon and the Netherlands with the objective of enhancing comparability. There will be one basic format for balance sheets, though member states may choose vertical or horizontal versions, or may allow both. Certain items must be shown on the balance sheet; other items may be grouped together (see next section). The income statement may be organized by type of expenditure or by stage of production. In each case, a horizontal or vertical format is allowed by the directive. The detail required will considerably exceed that published at present by British companies in their profit and loss accounts. In particular, the cost of goods sold will have to be shown. This will be welcomed by financial analysts. The general increase in uniformity, without complete rigidity, should make comprehension of accounts by nonaccountants somewhat easier.

As for disclosure in notes, there are many disclosures in U.S. and British financial statements not provided by those in most EEC countries. Many of these become necessary under the Fourth Directive, for example, average number of employees, financial commitments, directors' benefits, and turnover by category and area.

Throughout most of the EEC (but not in the United Kingdom),

publication requirements are relaxed for small or private companies. The directive (unlike the earlier drafts) makes no distinction between public and private companies. However, there are important distinctions based on size. Small companies are those which satisfy at least two of the following criteria: balance-sheet total < 1m units of account (u.a.),[15] turnover < 2m u.a., employees < 50. Such small companies may be permitted by member states to publish an abridged balance sheet without an income statement, and to avoid an audit. Medium-sized companies are those which satisfy at least two of these: balance-sheet total < 4m u.a., turnover < 8m u.a., employees < 250. These companies may be permitted to abridge their balance sheets and to omit the detail of the calculation of gross earnings in their income statements. If the British government takes advantage of these provisions, there will be considerable advantages for smaller companies.

An important new provision in the final directive is the establishment of a "contact committee" to deal with problems arising with the implementation, and suggestions for amendments. This may help to reduce the problems of inflexibility, which have been a particular concern of British accountants not accustomed to detailed prescriptions in company law. Nevertheless, the directive has already been criticized in the United Kingdom for being too creditor biased, and doubt has been cast on the usefulness of harmonizing historical cost accounting.

The important remaining aspect of the harmonization of consolidation practices awaits the approval of the Seventh Directive. The present draft proposes that subsidiaries (both domestic and foreign) shall be consolidated using the parent-company concept, and that associated companies[16] shall be treated by the equity method.

This appears very similar to British practice, but there are some important differences. The definition of an associated company is in line with British practice (that is, a 20 percent or higher holding, or a joint-venture arrangement). However, the concept of a subsidiary follows German practice and relies on the existence of control "on a unified basis," rather than on percentages of stockholdings. Also, proportional consolidation may be allowed by member states for joint ventures.

Finally, it is proposed that "horizontal consolidation" will be

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[15] The European unit of account is based on a basket of EEC currencies. For approximations, the unit of account may be taken to be between 1 and 1.5 U.S. dollars.

[16] "Associated company" is a British expression used to denote those companies which are treated by the equity method of consolidation.

necessary for companies within the EEC which are independent of each other but are owned by the same parent outside the EEC. For example, if a U.S.-based multinational company has subsidiaries in the United Kingdom, France, and Germany, these subsidiaries jointly would have to prepare one set of "consolidated" EEC accounts even though none of them had any control over any other.

NEW BRITISH COMPANY LAW

In September 1979, the British government issued a Consultative Document (or "Green Paper") called "Company Accounting and Disclosure."[17] Its purpose is to announce the government's proposals on the reform of company law, in particular those changes which will be necessary to implement the Fourth Directive. It is intended that British companies shall have the maximum flexibility permitted by the directive (Green Paper, part B, II, iii). This is evidenced, for example, by the proposals on formats. Both of the two balance-sheet formats in the directive, and any of the four profit and loss formats are to be allowed (see exhibits 2 and 3).

To understand the Green Paper's proposals on formats, two further concepts which are quite new for the United Kingdom must be discussed. As mentioned in the previous section, the directive allows member states to introduce reduced disclosure for smaller companies. The British government intends to take advantage of this. The suggested definitions can be seen in the first row of exhibit 4. The second concept is the difference between financial statements which are "drawn up" for shareholders, and those which are "published" and sent to the registrar of companies. Small companies will be required to disclose less than large companies; there are to be greater relaxations for published accounts than for drawn up accounts. Exhibit 4 summarizes the publication proposals.

This new proposed distinction between companies, based on size, will be a major innovation for British company law. The expression "proprietary company" will provide a useful label for small private companies. It is not yet clear whether the government will take advantage of the option in the directive to reduce the scope of audits for proprietary companies. If it does, a "review" will still be necessary (part A, chapter II).

The Green Paper announces the intention to introduce extra disclosure requirements for *large* companies: funds-flow statements

[17] Department of Trade, *Company Accounting and Disclosure* (London: H.M.S.O. 1979).

Exhibit 2. A Proposed U.K. Balance Sheet

	£	£
A. Subscribed capital called but not paid		xxxx
C. Fixed assets		
I. Intangible assets		
Preliminary expenses	x	
1. Costs of development	x	
2. Concessions, patents, licences, trademarks, etc.	x	
3. Goodwill	x	
4. Payments on account	x	
	xx	
II. Tangible assets		
1. Land and buildings	x	
2. Plant and equipment	x	
3. Other fixtures and fittings, tools, and equipment	x	
4. Payments on account, and tangible assets in course of construction	x	
	xx	
III. Investments		
1. Shares in group companies	x	
2. Loans to group companies	x	
3. Participating interests	x	
4. Loans to undertakings with which the company is linked by virtue of participating interests	x	
5. Investments held as fixed assets	x	
6. Other loans	x	
7. Own shares	x	
	xx	
D. Current assets		
I. Stocks		
1. Raw materials and consumables	x	
2. Work in progress	x	
3. Finished goods and goods for resale	x	
4. Payments on account	x	
	xx	
II. Debtors*		
1. Trade debtors	x	
2. Amounts owed by group companies	x	
3. Amounts owed by undertakings with which the company is linked by virtue of participating interests	x	
4. Other debtors	x	
5. Subscribed capital called but not paid	x	
6. Prepayments and accrued income	x	
	xx	

Exhibit 2. (cont.)

	£	£
III. Investments		
1. Shares in group companies	x	
2. Own shares	x	
3. Other investments	x	
	xx	
IV. Cash at bank and in hand	xx	
E. Prepayments and accrued income	xx	
	xxx**	
F. Creditors: amounts becoming due and payable within one year		
1. Debenture loans, showing convertible loans separately	(x)	
2. Bank loans and overdrafts	(x)	
3. Payments received on account of orders	(x)	
4. Trade creditors	(x)	
5. Bills of exchange payable	(x)	
6. Amounts owed to group companies	(x)	
7. Amounts owed to undertakings with which the company is linked by virtue of participating interests	(x)	
8. Other creditors, including tax and social security	(x)	
9. Accruals and deferred income	(x)	
	(xx)	
G. Net current assets/liabilities	xxx***	
H. Total assets less current liabilities		xxxx
I. Creditors: amounts becoming due and payable after more than one year		
1. Debenture loans, showing convertible loans separately	(x)	
2. Bank loans and overdrafts	(x)	
3. Payments received on account of orders	(x)	
4. Trade creditors	(x)	
5. Bills of exchange payable	(x)	
6. Amounts owed to group companies	(x)	
7. Amounts owed to undertakings with which the company is linked by virtue of participating interests	(x)	
8. Other creditors, including tax and social security	(x)	
9. Accruals and deferred income	(x)	
		(xxxx)

Exhibit 2. (cont.)

	£	£
J. Provisions for liabilities and charges		
1. Provisions for pensions and similar obligations	(x)	
2. Provisions for taxation, including deferred tax	(x)	
3. Other provisions	(x)	
		(xxxx)
K. Accruals and deferred income		(xxxx)
		xxxx
L. Capital and reserves		
I. Subscribed capital called up (of which £ has been paid up)		x
II. Share premium account		x
III. Revaluation reserve		x
IV. Reserves		
1. Capital Redemption Reserve Fund	x	
3. Reserves provided for by the Articles of Association	x	
4. Other reserves	x	x
V. Profit (loss) brought forward		x
VI. Profit (loss) for the financial year		x
		xxxx

*Amounts due in less than one year and more than one year to be shown separately in respect of each heading.
**Total current assets.
***Current assets less creditors becoming due and payable within one year.
Source: Department of Trade, *Company Accounting and Disclosure* (London: H. M. S. O., 1979), Chapter III.
Note: The lettering and numbering in exhibits 2 and 3 are those adapted by the British government from the fourth directive. Hence certain letters or numbers are omitted or repeated.

(not required by the directive), and notes on short-term borrowings, leasing arrangements, pension commitments, and disaggregation of turnover (sections v to vii of chapter VI). As expected, the government intends to allow revaluations of assets and full current cost accounting, as permitted by Article 33 of the directive.

OTHER DIRECTIVES AND REGULATIONS

Exhibit 1 shows a considerable list of EEC directives and regulations, which are mainly still in draft form. The most important directives on company law are the fourth and seventh, discussed earlier. The others are briefly described in exhibit 1.

Exhibit 3. A Proposed U.K. Profit and Loss Account

	£	£
1. Turnover		xxx
2. Cost of sales		(xxx)
3. Gross profit/loss		xxx
4. Distribution costs		(xxx)
5. Administrative expenses		(xxx)
6. Other operating income		xxx
— Operating profit/loss		xxx
7. Dividends from subsidiaries	x	
7. Dividends from participating interests	x	
	xx	
8. Interest on loans to group companies	x	
8. Interest on other loans	x	
	xx	
10. Amounts written off investments		(xxx)
11. Interest payable to group companies	(x)	
11. Other interest payable	(x)	(xxx)
— Profit/loss before tax		xxx
12. Corporation Tax		(xxx)
13. Profit/loss after tax		xxx
14. Extraordinary income	x	
17. Less: tax thereon	(x)	xxx
19. Profit/loss for the year		xxx

Source: Department of Trade, *Company Accounting and Disclosure* (London: H.M.S.O., 1979), Chapter III.

Regulations become law throughout the EEC without the need of action by the legislatures of member states. There are two draft regulations of relevance here. The draft regulation for a European company (Societas Europea) is moving slowly, particularly because of disagreements as to employees on boards of directors. It would create a business form subject to EEC law and taxation rather than to those of member states. No agreement is in sight. There is more likely to be agreement on the draft regulation on the European Cooperation Grouping. This regulation would facilitate the creation of a business form suitable for multinational temporary joint ventures within the EEC.

The draft directive on the harmonization of corporate taxation proposes the adoption of an imputation system of corporation tax throughout the EEC with rates between 45 and 55 percent, and tax credits between 45 and 55 percent of the underlying corporation tax. Progress will also be slow on this directive. There are no plans to

Exhibit 4. Green Paper's Publication Proposals

	Large	*Medium*	*Small "proprietary"*
1. Definitions	All listed	All public not large	Turnover <£1.3m B.S. <£0.65m
2 out of 3 size	Others with: Turnover >£5m B.S. >£2.5m Employees >250	All private not small	Employees <50
2. Balance sheet drawn up for shareholders	May show Arabic numeral headings in notes	May show Arabic numeral headings in notes	May omit some Arabic numeral headings
3. Balance sheet published	As above	As above	May omit Arabic numeral headings
4. Profit and loss account drawn up for shareholders	Flexible arrangement	Flexible arrangement	Possibly combine 1-5 in exhibit 3
5. Profit and loss account published	As above	As above, and possibly combine 1-5 in exhibit 3	Exempt

harmonize the calculation of taxable income, which is defined very differently in different member states. The latter point renders the proposals somewhat cosmetic. This draft directive is discussed by this author elsewhere.[18]

SUMMARY

The passing of the Fourth Directive into national company law throughout the EEC should narrow some of the important differences in accounting outlined earlier. The "fair" presentation should take precedence over detailed rules; conservative allowances in excess of reasonable estimates will be separately declared; and the effects of taxation on accounting expenses will also be separately declared. In addition, the formats of published financial statements will become

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[18]C. W. Nobes, "Corporation Taxes in the EEC, and Their Harmonization," *Accountancy* (October 1978).

more standardized throughout the EEC, and corporations of similar sizes will be subject to similar publication requirements. When the Seventh Directive is finalized by the Council of Ministers, there should be considerable harmonization of practices within the important area of consolidation.

Nevertheless, it is likely that substantial diversity (both between and within countries) will still be possible within the national laws which will eventually be passed. Supporters of the view that rigid uniformity merely masks a multitude of differences will be happy with this. However, the possibility of different inflation accounting systems of varying prominence in difference EEC countries may destroy any hopes of simple comparability.

The Unit of Account in Consolidated Financial Statements of Multinational Enterprises

MICHAEL H. JACOBI*

The treatment of fluctuating currencies in the financial statements of multinational enterprises (MNE) is probably the most highly debated current question in accounting for multinational activities. In fact, the float of currencies has become one of the major obstacles of international business in general. Exhibit 1 reports the magnitude of the changes in exchange rates during the seventies.

To date, discussions in financial accounting have centered on the question of translating foreign-currency balances and foreign-currency denominated financial statements into domestic-currency denominated statements, primarily for consolidation purposes. However, for several years some companies have become increasingly aware of the fact that the overall positive local developments (of their subsidiaries) can turn into negative results upon consolidation. Dutch, German, and Swiss companies, particularly, were forced to notice this problem.

The basic question for these companies is which is the correct fact, the positive local one or the negative consolidated one. This question leads directly to the underlying problem of the unit of account in the consolidated financial statements of multinational enterprises. Is it possible to provide a "true and fair view" of the activities of an American MNE by accounting in U.S. dollars?

The discussion of this question begins with two examples which illustrate the second question.[1]

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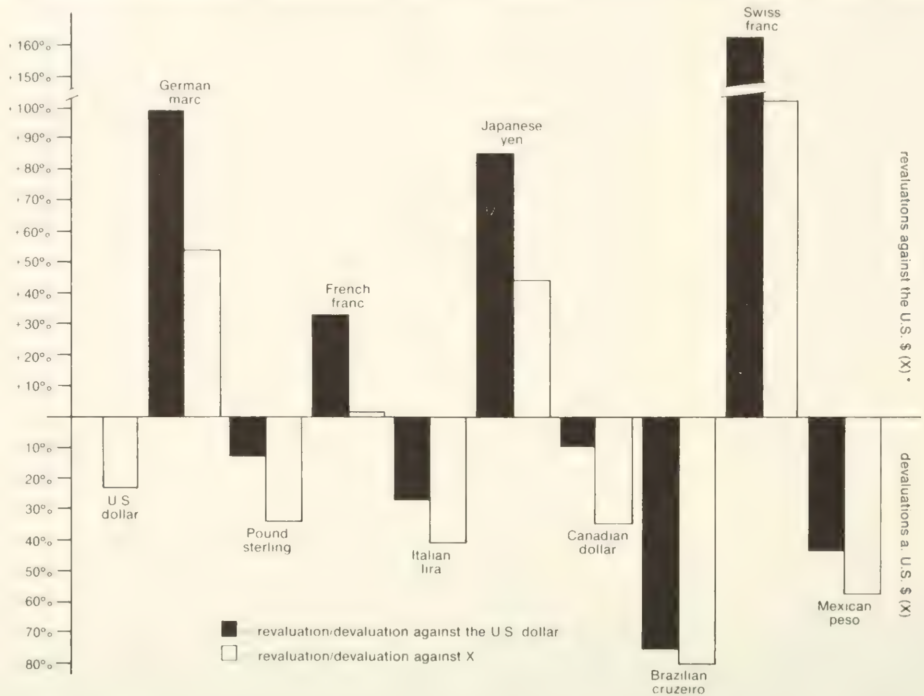
[1]To avoid the criticism that we exaggerate the distortions, we used real world data as much as possible.

Exhibit 1. Changes in Exchange Rates 1970 to 1978[2]



*x should be ignored for the time being.
[2]Compiled from International Monetary Fund, *International Financial Statistics* (March 1977) and (February 1979).

CASE 1[3]

The accounts of Company A in nation NA and of Company B in nation NB must be consolidated. The exchange rates between the currencies of NA, local currency of A, LCA, and that of NB, LCB, were/are

in 1972, 1 LCA	=	3.8 LCB
in 1976, 1 LCA	=	2.5 LCB
in 1977, 1 LCA	=	2.0 LCB.

After all intercompany transactions have been eliminated, each single company shows the following local balance sheets in 1977:

Balance sheet of A (Billions LCA)

Current assets		Liabilities	
Monetary	0.49	Short term	0.29
Inventory	0.31	Long term	0.30
Fixed assets	0.64	Equity	0.85

Balance sheet of B (Billions LCB)

Current assets		Liabilities	
Monetary	2.08	Short term	1.04
Inventory	1.21	Long term	1.42
Fixed assets	2.19	Equity	3.02

If we calculate three important ratios, we find the following *local* results:

	Company A	Company B
Current ratio (current assets/liabilities)	2.76	3.16
Debt/equity ratio (%)	69.4	81.5
Fixed assets covered by equity (%)	75.3	72.5

If we combine both balance sheets by translating the respective amounts in the balance sheet of one company into the currency of the other company using the monetary-nonmonetary approach, that is, we determine that

[3]The exchange rates employed are the Swiss franc U.S. dollar rates at the end of 1972, 1976, and 1977. Figures in the "single company" balance sheets stem from the 1977 annual reports of Dart ("A") and Sandoz ("B"). To simplify, figures were rounded and grouped together. The selection of these two companies is accidental and does not imply any real connection between Sandoz and Dart.

Fixed assets and equity are translated at 1 LCA = 3.8 LCB;
Inventories are translated at 1 LCA = 2.5 LCB; and
All monetary items are translated at 1 LCA = 2.0 LCB.

The resulting consolidated balance sheets in currencies of LCA and LCB are shown below (the balance sheet expressed in currency X should be ignored for the time being).

Consolidated Balance Sheet (Billions LCA)

Current assets		Liabilities	
Monetary	1.53	Short term	0.81
Inventory	0.79	Long term	1.01
Fixed assets	1.22	Equity	1.64
		Translation gain	0.08

Consolidated Balance Sheet (Billions LCB)

Current assets		Liabilities	
Monetary	3.06	Short term	1.62
Inventory	1.99	Long term	2.02
Fixed assets	4.62	Equity	6.25
Translation loss	0.22		

Consolidated Balance Sheet (Billions X)

Current assets		Liabilities	
Monetary	1.26	Short term	0.67
Inventory	0.69	Long term	0.84
Fixed assets	1.12	Equity	1.52
		Translation gain	0.04

Ratio analysis now provides the following results:

	In currency LCA	In currency LCB	In currency X
Current ratio	2.86	3.12	2.91
Debt/equity ratio (excluding translation gains/losses) %	110.9	58.2	99.3
Debt/equity ratio (including translation gains/losses) %	105.8	60.4	97.4
Fixed assets covered by equity (excluding translation gains losses) %	74.9	73.9	73.7
Fixed assets covered by equity (including translation gains losses) %	70.9	76.6	71.8

Apparently, no ratio is strictly comparable if different units of account are used. The same value in ratio analysis means different things, for example, a return on investment (ROI) of 5 percent of an American MNE is not comparable to a ROI of 5 percent of a German MNE. In practice, an analyst will not be able to calculate what the balance sheet would be if expressed in a different unit of account, because neither all historic rates applied nor the amounts translated under each rate are disclosed. Therefore, an analyst cannot adjust ratios to make them comparable. For example, he will not be able to calculate the U.S. dollar equivalent of a ROI of 5 percent which is derived from a deutsche mark-denominated set of financial statements.

CASE 2

Let us assume that a MNE has the following sales (as expressed in local currencies).[4]

Sales in	M.D.	1972	1973	1974	1975	1976	1977	Total change (%)
United States	US$	562	585	771	863	960	954	+ 70
Germany	DM	596	705	786	750	845	880	+ 48
United Kingdom	£	72	80	93	103	138	164	+127
France	FF	772	893	1,020	1,027	1,114	1,220	+ 58
Italy	Lira	80,557	92,437	112,014	122,987	166,533	182,078	+126
Japan	Yen	23,541	30,262	33,430	42,554	50,973	52,972	+125
Spain	Pta.	3,713	4,419	5,389	5,574	7,129	8,137	+119
Canada	CD.$	55	65	79	101	102	113	+105
Brazil	Crz.	345	490	674	1,040	1,759	2,619	+659
Switzerland	SRF	206	196	229	201	222	218	+ 6
Mexico	Peso	521	631	814	938	1,181	1,719	+230
Australia	A.$	31	35	39	41	46	52	+ 68

Now we consolidate these sales using the exchange rates applicable into U.S. dollars, pounds sterling, deutsche marks, and Swiss franks (X should be ignored for the time being).[5]

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[4]The sales volumes expressed in local currencies (except "total change") stem from the annual reports of CIBA-GEIGY and represent sales in certain major countries. See CIBA-GEIGY, *Annual Reports* 1972 through 1977, p. 11.

[5]Consolidated sales as expressed in this table do not match with CIBA-GEIGY's total sales since our table only adds up those sales disclosed above. Furthermore, such a translation should be conducted at year's average rates. However, in order to provide comparable results with the data translated into X, all amounts were translated using year's end rates. Using year's average rates would not alter the underlying fundamental question. The "total real change" was calculated by comparing the 1977 sales with the restated sales of 1972 (restated according to the change in the consumer price index). Sources as in footnotes 1 and 4.

Total Consolidated sales		1972	1973	1974	1975	1976	1977	Total nominal charge	Total real charge
U.S. $	Amounts	1,591	1,866	2,301	2,415	2,689	2,985		
	Change in %		+17	+23	+ 5	+11	+11	+88	+29
£	Amounts	678	803	980	1,193	1,580	1,566		
	Change in %		+18	+22	+22	+32	−1	+131	+ 9
DM	Amounts	5,094	5,044	5,544	6,333	6,352	6,283		
	Change in %		−1	+10	+14	0	−1	+23	−6
SFR	Amounts	6,004	6,053	5,845	6,327	6,589	5,970		
	Change in %		+ 1	−3	+ 8	+ 4	−9	−1	−24
X	Amounts	1,465	1,547	1,879	2,063	2,314	2,457		
	Change in %		+ 6	+21	+10	+12	+ 6	+68	+ 7

This comparison implies that a Swiss company with a slight decrease in sales over a six-year period is better off than an American company with an average annual increase in sales of 13 percent. Even if consolidated sales are adjusted for the differences in inflation rates in these countries, significant differences in trends of sales volume remain. Would an analyst realize this fact? Or would he praise the U.S. company for showing a steady growth rate and speak of an "under-the-given-situation satisfactory" performance of the Swiss enterprise? Would the management of such companies realize this or would a Swiss company's management make strong efforts to overcome this "stagnation" of sales while an American company's management would be quite satisfied with the company's growth rate? Did sales "grow," "stagnate," or "shrink"? The answer to this question is likely to affect business decisions materially.

The conclusions suggested by these two examples are disturbing. Even if one neglects national differences in accounting principles, one must realize that the financial statements of MNEs are not comparable merely because they are denominated in different currencies. Trends reverse across "currency-borders," and decreases of sales in one unit of account become more attractive than considerable increases in other units even if the data are inflation adjusted. Clearly, the aim of providing a "true and fair view" can hardly be achieved under these circumstances.

WHY PRESENT STATEMENTS IN THE "DOMESTIC CURRENCY"?

With very few exceptions, MNEs today use the currency of the parent company's country of domicile (the "domestic currency") as the unit of account in consolidated statements. Two major reasons are advanced for this practice.

1. Investors in the equity of the parent company are often regarded as the sole audience of interest for the annual reports. Therefore, any information given is meant to explain the situation in the currency of this audience of interest. Since investors are thought to be almost entirely of "domestic" nationality, financial statements should be stated in the domestic currency: "An American MNE informs its shareholders through its annual report. Since these investors are almost entirely Americans, financial statements should be expressed in U.S. dollars."

Also behind this attitude is the basic idea that any activity engaged in is solely conducted to increase the parent company's profit: "The ultimate reason for making foreign as well as any other kind of investment is to increase domestic general purchase power."[6]

2. The managements of MNEs do not realize the distortions which stem from fluctuating exchange rates. The whole issue of floating exchange rates is a rather new phenomenon. Its consequences are probably not fully seen at present. Furthermore, today's MNEs are companies which evolved from national into international multinational firms. Perhaps their managements did not fully realize the impacts of this evolution and continue to evaluate business opportunities from a domestic viewpoint: "Management is accustomed to thinking, measuring, and making decisions in terms of dollars."[7] "Top managements are often single-currency conscious. Translation of accounts fosters this attitude and sometimes leads to, let us say, U.S.-dollar oriented decisions when Mexican-peso oriented decisions are really called for."[8]

ARE THESE ARGUMENTS VALID?

For several reasons, the author does not consider that these arguments provide sufficient justification for selecting the domestic currency as the unit of account to be used for financial statements.

1. Domestic investors in the equity of the parent company are by no means the only audience of interest of consolidated financial statements of a MNE. Instead, practical experience in an international environment clearly indicates the opposite—that it is wrong to

[6]R. Gayton, "A Critical Examination of Presently Accepted International Accounting Translation Techniques" (Ph.D. dissertation, University of California, Berkeley, 1973), p. 236.

[7]P. Rosenfield, "Accounting for Foreign Branches and Subsidiaries," *International Journal of Accounting* (Spring 1972): 44.

[8]Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967), pp. 208-13.

assume that, for example, all the shareholders of an American parent company of a MNE are Americans. After all, the stocks of some 200 to 300 American companies are listed on foreign stock exchanges to attract foreign investors.[9] For such foreign shareholders, figures expressed in U.S. dollars might be misleading because these readers would analyze U.S. dollar-denominated financial statements and compare them with local ones.

Experience also shows that the American interpretation of investors in general being the sole audience of interest of annual reports[10] is too simplistic in an international environment. Creditors, governments, and employees have become especially important audiences as well.

a. The wish of creditors to "protect their credits" has strongly influenced German accounting rules.

b. French accounting and reporting rules have been modified recently so that they respond better to the information needs of trade unions. The disclosure of data concerning "social accounting" questions is now required.

c. In England, the Ford Company's subsidiary had to experience the unpleasant situation of a trade union challenging its (inflation-adjusted) accounts and preparing a different set of statements for negotiation purposes.

d. The government's interest in annual reports is clearly illustrated by its involvement in the standard-setting process in countries such as Germany, France, Japan, and Switzerland. In international accounting, the activities of the European Economic Community [EEC], the Organization for Economic Cooperation and Development [OECD], and the United Nations [UN] have underlined these interests as well.

Therefore, we must conclude that, in reality, annual reports of MNEs inform different groups of readers. They have different interests and are located in different nations. By using the domestic currency as the unit of account, these differences are neglected, and biased statements favoring domestic audiences are published.

2. The argument that the domestic currency is the correct unit of account because the ultimate aim of investments is to increase

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[9]At the end of 1977, there were almost 2,000 listings of foreign stock at eighteen major stock exchanges. A minimum of 589 companies from forty-three countries was involved, of these at least 170 American. The total figure of companies having shares listed abroad probably lies around 800. See Michael Jacobi, "Probleme der Ausgestaltung internationaler Jahresabschlussvorschriften" Band 41, Schriftbenreihe der Schweizer. Treuhandund Revisionskammer, Zurich 1979, p. 50.

[10]For example, Financial Accounting Standards Board, *Scope and Implications of the Conceptual Framework Project* (Stamford, Conn.: FASB, 1976), p. 58.

domestic purchasing power seems to be unrealistic and probably violates the going-concern principle. It seems to be unrealistic because under normal circumstances, a large share of worldwide profits is reinvested directly without really reaching the parent company at all. Often, such funds are channeled to the next investment opportunity via intermediate holding companies or cash centers.[11] Only a certain amount of total profits is repatriated and only part of this is paid to stockholders. A method which unrealistically assumes that 100 percent of all profits are repatriated and paid must lead to unrealistic results.

It might be argued that the preceding argument reflects a short-term view, while in the long run, profits really are repatriated and paid. This might be true, but it is irrelevant for accounting purposes for the following reasons.

a. If the definite date for repatriation (of the *then*-invested *capital*) is known, we would have to treat said company as a liquidating (not a going) concern and use equivalent valuation methods. This situation is not normally assumed.

b. If no definite date of repatriation is known, we must accept this fact and assume that the business is a going concern, continuing its operations in a similar way as before. For MNEs, the going-concern principle implies that the company will remain active in several countries (although not necessarily in those countries in which the company now operates). A going-concern MNE remains multinational by definition.

However, if we assume that the MNE remains multinational, we cannot choose accounting methods which indirectly imply that foreign operations are stopped, something we do if we assume that all profits (and all capital) are repatriated.

3. Whether the management of a MNE evaluates business opportunities from a domestic or from a different viewpoint will be discussed later. However, the author should like to point out that it is almost impossible for a MNE to make decisions completely from a parent-company viewpoint. Although the degree of importance of the parent company might differ—U.S. companies are often more centralized than other enterprises and thus are more likely to evaluate the business from a domestic viewpoint and in domestic currency—considerations of the impact of certain decisions on the local situation will always be part of the overall decision-making process in a MNE. The postulate of "going native" unavoidably leads to the

[11]See F. Weston and B. Sorge, *International Managerial Finance* (Homewood, Ill.: Richard D. Irwin), pp. 239-40.

question "How does decision X affect the local situation of our subsidiary and its local financial statements?" Therefore, the overall decision-making process in a MNE will always be a multicurrency one, although more or less biased favoring the domestic currency.

WHICH ALTERNATIVES EXIST?

Few alternatives have been discussed in accounting theory thus far. Let us briefly examine some alternatives which Mueller identifies.[12]

The Legal Basis

One might use a certain currency as the unit of account because it is the currency of the country in which the parent company has its legal domicile. In this case, however, we run the risk of preferring "form over substance." Especially with MNEs, legal structures differ materially from the organization, decision-oriented structure of the group.

A variety of reasons can be given for certain legal structures—for example, tax considerations and other legal requirements (disclosure) or historical trends and events (mergers across borders). Well-known cases in which the legal structure differs significantly from the economic (decision-oriented) one include companies such as these: Nestlé, which is a MNE with one legal headquarters in Switzerland and one in Panama; Hoffmann-La-Roche, a MNE with one legal headquarters in Switzerland and another in Canada; Royal-Dutch/Shell, where the parent companies of the group are the British Shell T & T and the Dutch Royal Dutch N.V.; Unilever, where the parent companies are the British Unilever Ltd. and the Dutch Unilever N.V.; Agfa-Gevaert, where the parent companies are the German Agfa and the Belgian Gevaert companies; and Schlumberger, which relocated its legal headquarters in the Netherlands Antilles. Implying that only one currency (and if so, which?) has entered the decision-making process would be rather misleading in such cases. Legal considerations might easily disguise economic realities.[13]

The Transaction Basis

Some propose to use the currency in which most transactions occur as the unit of account because this will simplify translation procedures. In fact, this reason was given by those nine Canadian companies

[12] Gerhard G. Mueller, *International Accounting*, p. 203. See also Norlin Rueschhoff, *International Accounting and Financial Reporting* (New York: Praeger, 1976), pp. 119-21.

[13] R. M. Skinner, *Accounting Principles, A Canadian Viewpoint* (Toronto: CICA, 1972), p. 225.

which account in U.S. dollars instead of Canadian dollars.[14] However, a situation in which one currency dominates the business of a MNE so strongly is unlikely to occur, especially in times of fluctuating currencies. Usually this occurs in companies which operate in very few countries and where one country accounts for the overwhelming part of all operations. Furthermore, simplification of accounting procedures cannot be the only yardstick for sound accounting rules.

The Ownership Basis

Others argue that the currency in which the investor made his original investment should be used. This usually conforms with the currency in which dividends are paid. A close look shows two weaknesses of the argument. Because accounts are not usually adjusted for inflation, one does not really account in the currency in which the investor once made his investment. In fact, this will never be possible because investors buy stock at the market at different times and with different values of money. Also, reasoning associated with the "ownership basis" misinterprets the purpose of financial statements because one assumes a direct link between the investor and the amounts reported in the financial statements. But such a direct link is *only* created via the values of distributable profit and, to some extent, paid-in capital. All other data disclosed are primarily meant to *inform* about the state of the company (and not to show "links"). Therefore, it is correct to demand the translation of the amounts of distributable profit and paid-in capital into the currency which the "ownership basis" requires, but for all other items, the reasoning is irrelevant.

None of these alternatives seems satisfactory.

A NEW PROPOSAL: A DECISION-ORIENTED UNIT

If we analyze the preceding points, we detect an obvious close relationship between the choice of the unit of account and the viewpoint from which we look at this problem. If we take the viewpoint of a domestic investor, we might require accounting in domestic currency. If we accept the viewpoint which would be expressed by a multitude of different multinational audiences, we might favor a local approach (financial statements expressed in local

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[14]These companies are INCO, Brascan, Seagrams, Hiram Walker, Canadian International Power Co., Alcan, Asamera, Massey Fergueson, and Total Petroleum. See also Canadian Institute of Chartered Accountants, *Financial Reporting in Canada*, 11th edition (Toronto: CICA, 1975), p. 141.

currency). There also seem to be some differences in the degree of centralization of management's decision which might have an impact on the choice of the currency.

Let us evaluate the last point first. The state of a company results from business decisions and their impact on the enterprise in its changing environment. Accounting provides a picture of the financially measurable part of the state of the enterprise. Thus, accounting basically measures the impact of business decisions. Sound accounting should measure decisions correctly, that is, the way decisions are made (its assumptions and intentions) should be as transparent through accounting as the result from these decisions. Accounting "reality" must conform with economic "reality"[15] or, since "reality" as such does not exist, with the perceptions concerning economic "reality" of those who are responsible for providing financial statements. This is mainly the responsibility of the company's management and, to some extent, the auditor who assures that management's perception of "reality" does not differ completely from what the auditor regards as "reality."

Therefore, accounting must primarily reflect the perception of those who account. Unavoidably, management's evaluation of the company's state will assume a viewpoint which is also inherent in business decisions. In MNEs, different viewpoints can be found, depending on the basic organization of the decision-making process. If, for example, a MNE is very strictly organized in such a way that practically all of its decisions are made by the management of the parent company, this will imply that such decisions are often oriented towards the maximization of the parent company's earnings as expressed in domestic currency. Most decisions will then be made on the basis of the parent-company's currency, and consolidated accounts should reflect this basis.

If, however, even major decisions are made in a decentralized manner, the viewpoint of quasi-independent subsidiaries, as expressed in local results and in local currency, prevails. If we chose the parent company's currency under such a situation, we would incorrectly imply that this currency was the relevant basis for decision making in this MNE. A reader of financial statements would

[15]In the related area of translation of foreign accounts, a similar demand was brought forward by Burns when he pointed out that accounting exposure should correspond to economic exposure. See J. M. Burns, *Accounting Standards and International Finance, with Special Reference to Multinationals* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1976), p. 11.

be misled because he would expect decisions which aim specifically at maximizing the parent company's profits.

This distinction, which pinpoints extreme situations, might appear theoretical with little practical importance. Nevertheless, it is precisely this distinction which has gained wide appreciation among both theoreticians and practitioners in a different area of research on multinational enterprises. We refer to Permutter's distinction of the types of MNEs according to the decision-making process[16] into the following.

1. *Ethnocentric* Enterprises are strongly oriented toward domestic interests. This appears to be the first stage in the life of a MNE. Then management is still not aware of the problems that arise from differences in the economic environment a MNE faces. Among others, the ethnocentric approach implies—if we use American companies as an example—that American principles of doing business are enforced everywhere, no matter whether they fit or not.
2. *Polycentric* Enterprises are strongly oriented toward local interests. This type exists during the second state of a MNE's life, when top management realizes, for example, that American business principles are not very useful in situations which are entirely different from the American one. The result is a major effort to decentralize and manage the group "more akin to a confederation"[17] giving each subsidiary a large degree of freedom.
3. *Geocentric* Enterprises have adopted a global viewpoint, thus abstracting from local or domestic "national" interests. In this third and highest stage of a MNE's truly becoming "multinational," the group is regarded as "a whole whose focus is on world-wide objectives as well as local objectives, each part making its unique contribution with its unique competence."[18] This form is regarded as the most efficient, though also the most difficult to achieve, form of a MNE.[19]

How does this distinction relate to the unit of account problem? If we accept the fact that a decision leads to different accounting results

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[16]H. Perlmutter, "Multinational Corporations," *Columbia Journal of World Business* (1969): 12; and idem., "L'entreprise internationale, trois conceptions," *Revue economique et sociale* (May 1965): 151.

[17]Perlmutter, "Multinational Corporations," p. 12.

[18]Ibid.

[19]For example, A. W. Clausen (BankamericaCorp.) "The Internationalized Corporation—An Executive's View," *Annals of the American Academy of Political and Social Science* (September 1972): 12; and J. Maisonrouge, "The Education of International Managers," *Quarterly Journal of AISEC International* (February 1967): 3.

if measured in different currencies, we must attempt to measure the impact of the decision in the currency in which the decision is made. The implicit currency of decision making seems different under each of these three situations. *Theoretically,* one must conclude that different currency mixes should be employed depending on the specific situation: very strict *ethnocentric* MNEs in which all but very minor decisions are made by the parent company's management should use the domestic currency. Such a situation is likely to occur if the company has only minor operations abroad (for example, 5 percent of its activities). However, as soon as the international division assumes a larger share of the company's activities, such an ethnocentric approach will unavoidably be "watered down" since a certain amount of "going native" will be inevitable. As a consequence, the majority of decisions will still reflect a domestic viewpoint (as expressed in domestic currency) but will also include considerations of foreign local implications. In this case, a currency mix which is weighted in favor of the domestic currency would be appropriate.

The unit of account of a polycentric MNE should, on the other hand, reflect the multiplicity of currencies that underlie business decisions. To obtain an adequate unit of account for the group as a whole, one would have to create a currency basket which reflects adequately the importance of the local decisions for the group as a whole. As a yardstick, one could try to measure the relative importance of a subsidiary for the group as a whole. Through this a weighting factor can be derived for determining the share of this currency in the group's unit-of-account basket. Since decision making in the *geocentric* MNE is not based on purely local or domestic considerations, such a company-specific basket of currencies is unnecessary. Instead, the counterpart to multinational decision making is a multinational unit of account.

Can these considerations be applied to actual situations in MNE activities? The author does not believe the proposals for ethno- and polycentric MNEs can be used in practice. Certainly, it would be almost impossible to find adequate criteria to choose the weighting factor of each currency in the mix. Would sales volume of the subsidiaries, assets, equity (or net exposure), number of employees, profitability, or company outlook be correct factors? How could such criteria be linked together?

Also, such a basis must be redefined annually because not all subsidiaries perform the same way. Thus, consistency in financial statements would be difficult to maintain. Finally, there would be too

many opportunities for manipulation on such a basis. The reliability of published data could suffer considerably.

Similar problems are not present if we follow the alternative suggested for the geocentric MNE. Here one can abstract from company-specific criteria and can thus avoid questions of weighting factors and manipulation. Several such international currencies have been discussed and used in recent years, such as the European Composit Unit, Special Drawing Rights (SDRs),[20] and, recently, the European Currency Unit. Only the SDRs, however, have gained international acceptance.

A major advantage of SDRs is their reliability. Since they are fixed by an independent intergovernmental authority, they leave little if any leeway for manipulation. They are as good as any given currency in this respect.

SHOULD MNEs ACCOUNT IN TERMS OF SPECIAL DRAWING RIGHTS?

We think that the answer must be affirmative. Although it might be theoretically possible to distinguish between ethno-, poly- or geocentric MNEs, we must agree to the fact that it will be impossible to distinguish clearly enough between these types. Such situations evolve gradually, and any separation would necessarily be too arbitrary to be useful. What we therefore need is a unit of account which is somewhat acceptable under each "multinational" circumstance. As the other alternatives of currency mixes seem impracticable, only the choice between the domestic currency and the SDR as a unit of account in consolidated statements exists. But while the domestic currency is an appropriate unit only under very specific circumstances (if a MNE is very ethnocentrically oriented), SDRs are correct for one kind of MNE (the geocentric) and are at least not totally incorrect for both of the other types, as both theoretically require some form of currency mix.

The example of revaluations/devaluations, as related to SDRs, demonstrates another very important point. To date, accounting theory in the field of foreign exchange has always assumed implicitly that changes in exchange rates are due to factors which influence foreign currencies, while the unit of account remains stable. We assumed that the deutsche mark and the French franc were responsible for exchange-rate changes in relation to the Swiss franc. This may or may not be true. But if a speculative action is directed against the unit of account, for example, the Swiss franc, this completely

[20]See Appendix.

distorts the picture of financial statements denominated in that currency.

Such changes in the so-called "external value" of the unit of account have thus far escaped the attention of accounting theory while changes in the "internal value" of this unit, inflation, have dominated accounting theory during the last decade. It is now appropriate to think of changes in the external value of a unit of account as well. Unfortunately, we cannot rely on a close relationship between the external and internal value of a currency as the purchasing-power parity theorem assumes. Even over extended periods, this theorem does not hold well enough.[21] Therefore, only by separately accounting for changes both in the external and the internal value of a currency can accounts of a MNE become meaningful.

The use of Special Drawing Rights might help in solving this problem. Although they were not designed in a way that would keep them entirely unaffected from revaluations/devaluations of the basket currencies, they lessen the impact of changes in the external value of any basket currency considerably. After all, there are no speculative actions "against SDRs."

We therefore conclude that the SDR should be the unit of account for consolidated statements of MNEs. To show the impact of such a unit of account, the earlier examples have been translated into SDRs ("X") as well. The author believes that the resulting accounting statements are the most adequate ones for measuring the activities of a MNE.

THE RESULTS MAY BE ADEQUATE, BUT ARE THEY UNDERSTANDABLE?

One final question remains to be answered. Most readers of financial statements are unaware of what SDRs are, how they are calculated, and how they evolve. Would it be advisable, therefore, to translate accounts which are denominated in SDRs into the respective local currencies? The answer must be found by reviewing the two cases given earlier. There could be little objection to translating the statements of one period at a uniform exchange rate into another currency. In this case, all ratios would remain unchanged.

Problems arise, however, with the second case. If we translate amounts denominated in SDRs into Swiss francs, for example, we

[21]For the period 1955 to 1975 (1970 to 1975), we calculated an arithmetic average of the deviation between inflation rates and exchange rates of twenty-nine countries of 15.6 percent (27 percent). The absolute average of the deviation was even 34.2 percent (29.3 percent). See Jacobi, "Probleme," p. 176.

shall again come to the same incorrect results in *trend* analysis as if we translated these amounts directly into Swiss francs. Again, we would have results which reflect, to a large extent, changes in the external value of the "reporting" unit of account (the Swiss franc). Trend analysis again would yield results which do not match the underlying economic situation, and the analysis of accounting performance over an extended period would differ materially from the economic performance over this period.

These problems appear to be so formidable that the author believes that they prohibit a translation of SDR statements into local currency units. Providing the annual statements in local currency (case 1) and explaining trends on the basis of SDRs (case 2) also do not appear desirable because the use of two units of account in one report will only add to confusion.

In this situation, we have a choice between two evils: publishing easy to understand but incorrect accounts or providing a correct picture of the company's state which needs some explanation. If the most important aim of accounting is to provide a "true and fair view" of the state of the company, we must accept the "second evil" and take the burden of explaining the unit of account. SDRs are not the first new issue which is introduced into accounting and needs some explanation in the beginning. After a few years, however, interested parties which really want to evaluate the MNE carefully will already understand what SDRs are.

The only meaningful exceptions to this reporting in SDRs might be the distributable profits and paid-in capital of the parent company. Since both are legally denominated and payable in a given currency, it seems reasonable to translate the respective amounts into this currency and disclose them in the footnotes. These two items are the only *direct* links between the investor and the company in which he invested. All other data are published only so that a reader of financial statements is able to judge the state of the company correctly.

If separate statements of the parent company are published as well—this is common practice in most countries except in the United States and Canada—even the translation of these two amounts could be avoided since both would appear in the parent-company's statements which would (correctly) be denominated in domestic currency units. This approach to disclose parent-company statements as well probably is superior to merely translating paid-in capital and profit, because additional evidence on the situation of the parent company would be provided.

APPENDIX

SDRs were created by the International Monetary Fund. They are only a unit of calculation, not a currency of their own. They are a measurement basis for transactions between federal reserve banks of different countries. For several years, however, they have gained some acceptance in the private sector, where they are used as a denominator of international contracts—they are employed as a means to hedge against currency fluctuations—and in the Eurobond business. In these cases, a certain amount (to be paid received) is fixed in SDRs but is payable in any convertible currency according to the exchange rate for SDRs at due date.

SDRs are calculated on the basis of a fixed currency basket which consists of sixteen currencies. The share of each currency is determined according to the share of world trade of that country (U.S. dollars counting twice). Today, the basket is defined as consisting of 33 percent U.S. dollar + 12.5 percent deutsche mark + 7.5 percent Japanese yen + 7.5 percent French franc + 7.5 percent pound sterling + 5 percent Italian lira + 5 percent Dutch guilder + 5 percent Canadian dollar + 4 percent Belgian franc + 3 percent Saudi rial + 2 percent Swedish crown + 2 percent Iranian rial + 1.5 percent Australian dollar + 1.5 percent Spanish peseta + 1.5 Norwegian crown + 1.5 percent Austrian schilling. To calculate the value of one unit of a SDR at a given date, all parts of the basket are translated into U.S. dollars according to the prevailing exchange rates and then weighted according to the respective percentages. Thus, via the U.S. dollar exchange rates, one can determine the value of a unit of SDR in any currency.

If the exchange rate of one of the basket currencies of the SDRs changes, the value of the SDRs changes too, although less dramatically. If, for example, the deutsche mark appreciates by 10 percent as compared with any other currency, the value of SDR increases by 10 percent of 12.5 percent that is, 1.25 percent. So, the SDR "devalues" compared with the deutsche mark but "revalues" compared with all other currencies.

An Analysis of Corporate Social Reporting in Germany

BIKKI JAGGI*

In the early 1970s, academicians and practitioners began to focus attention on corporate social reporting, suggesting several models for this. These included Linowes' Socio-Economic Operating Statement,[1] Seidler's Social Income Statement,[2] and Estes' Social Cost Benefit Analysis Statement.[3] Abt Associates, a consulting firm, achieved a pioneer accomplishment by publishing a comprehensive social balance sheet and income statement.[4] These statements attempted to report the social impact of corporate activities. The Scovill Manufacturing Company also endeavored to categorize firm activities according to social assets and social liabilities and published a social action report.[5]

This early enthusiasm for corporate social reporting, however, was not widespread and did not inspire management in general to disclose social information. Few firms followed Abt's lead in disclosing social information in a systematic form. Although Ernst and Ernst's[6]

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[1]D. F. Linowes, *The Corporate Conscience* (New York: Hawthorne Books, 1974).

[2]L. J. Seidler, "Dollar Values in the Social Income Statement," in L. J. Seidler and L. L. Seidler, editors, *Social Accounting: Theory, Issues and Cases* (Los Angeles: Melville Publishing, 1975).

[3]R. W. Estes, "A Comprehensive Corporate Social Reporting Model," reproduced in Seidler and Seidler, *Social Accounting.*

[4]Annual Reports of Abt Associates, Inc.

[5]1972 Annual Report of Scoville Manufacturing Company.

[6]Ernst and Ernst, *Social Responsibility Disclosures* (Cleveland: Ernst and Ernst, 1971-77).

survey of annual reports indicated that, in general, the number of firms disclosing social information in some form has increased steadily, it is evident from the result of this survey that these disclosures do not follow any pattern; social accounting information appears in different forms and in different locations in annual reports.

Corporate social disclosure practices in European countries, especially Germany, reveal a different trend than those in the United States. In the early 1970s, social disclosures did not receive much attention. These disclosures only recently began to receive greater importance in corporate annual reports.[7] The number of German firms disclosing social information as an integral part of their annual reports is steadily increasing.[8] Furthermore, a pattern for social disclosures is emerging. Shell's German subsidiary, Deutsche Shell A.G., is becoming a model for social disclosures for many firms.

This paper analyzes Deutsche Shell's social disclosure model. The concepts of a social accounts statement and a value-added statement receive special scrutiny. This paper should allow readers to learn of the actual experience of Germany in the preparation and publication of social reports and related social statements. The paper may also stimulate researchers and managements to evaluate critically social disclosure concepts developed in Germany and to examine whether these could be modified to suit the needs of firms in other countries. This paper is based not on abstract ideas relating to social disclosures but on pragmatic approaches to the feasibility and desirability of social disclosures.

STRUCTURE OF SOCIAL REPORTS

The social reporting structure in Germany has been experiencing a steady change. This reporting began with a narrative description of a firm's activities which had social impact. Later, the narrative description was modified to include a comparison of expenditures on social activities with social benefits accruing from the firm's activities. Since the quantification of social benefits was not possible, the description of benefits was narrative. Several German firms have used this model of social reporting. The social reports of STEAG and Saarbergwerke A.G. are early classic examples of this type of social reporting. In

[7]Social disclosures are being mandated in France.

[8]The number of German firms reporting social information in a systematic form has increased to 12. Most large publicly held corporations are in the process of including social disclosures in annual reports in some form.

1975, both BASF and Pieroth Vineyard Company also published similar social reports.

Recently, a new format for social reports has been developed, and this is being followed by most German firms which disclose social information. The social report is an integral part of the annual report. The first part of the annual report contains a description of the firm's economic and social goals and highlights the firm's activities in pursuit of these goals. Where possible, the description of these activities is supported by data and graphs. The discussion contained in part one provides information on management philosophy and the approach of management to social problems and issues. The second part of the annual report is comprised of five statements. In addition to the traditional statements, the balance sheet, income statement, and statement of changes in financial position, this section contains a social accounts statement and a value-added statement. The latter two have been added to provide additional specific information on the social impact of corporate activities. Both of these statements and the description of the firm's goals are discussed in this paper with special reference to Deutsche Shell's annual report.

GOAL ORIENTATION IN CORPORATE ANNUAL REPORTS

Deutsche Shell's management realized that changes in the social environment require a collateral change in the goals of the firm. In addition to achieving a reasonable return on investment, the firm recognized the need for other goals. The following goals received special emphasis in the report, beginning with 1975:

1. Achievement of an adequate return on investment;
2. Meeting consumers' needs as determined by market conditions;
3. Development of new processes and products;
4. Consideration of employees' interest; and
5. Regard for public concerns.

Each of these major goals is divided into subgoals. The first part of the annual report contains a discussion of the subgoals and the firm's important activities in pursuit of them. Although the major portion of the activities' description is narrative, the discussion is extensive and centers on specific objectives. This discussion covers approximately fifty-seven pages of the 1977 report. Highlights of the first section of Deutsche Shell's 1977 annual report are summarized here.

The discussion on the objective of return on investment provides a summary of financial results for the 1968 to 1977 period, including a

summary of the performance of its subsidiaries. The report also discusses the firm's policy to secure an adequate return on investment. The section on consumers' needs comments on improvements in product safety and quality. The main emphasis, however, is on pricing policies and analysis of sales by product line, production, and exploration. In addition, comments are offered on the company's competitive position, tanker and chemical business, market research, exploration, and diversification. The discussion of goals for development of new products and processes deals with research and development issues which could save energy, reduce costs, improve the environment, and assure users' health and safety.

The goal relating to the consideration of employees' interest is especially emphasized and receives more coverage than other goals. It describes the firm's personnel structure in terms of age and sex, employee training programs and associated costs, on-the-job accidents, expenditures on employee health plans, employee motivation, and reasons given by employees for leaving the firm.

The discussion of subgoals relating to public concerns provides information on the influence and interaction between the firm and (1) its natural environment, (2) the government, (3) economic/society science, (4) people, (5) youth, and (6) workers belonging to disadvantaged groups. This section also reports expenditure figures on investments relating to the improvement of the physical environment, such as air and water purification projects.

The inclusion of goals of the firm in social reports has received great attention in Germany, and firms there are in the process of including this information in their annual reports. Critics, however, question the usefulness of goal orientation of annual reports. The criticism primarily relates to the general statement on management philosophy and corporate goals. It is argued that a firm's social performance can be measured only in terms of specific goals, such as the reduction of pollution to a certain level. Therefore, it is suggested that a description of the firm's goals in general is also useful to the extent that it provides information on management philosophy and approach. The description explains why certain of the firm's activities are undertaken by management, and enables readers to judge whether these activities are really directed toward the goals. Furthermore, the inclusion of a description of the firm's goals in its annual statements is likely to encourage management to direct the firm's activities in a particular direction. In the absence of established social goals, management philosophy and managerial policies will remain obscure.

SOCIAL ACCOUNTS STATEMENT IN SOCIAL REPORT

The narrative description of enterprise goals, however, is not the most important development in German social reporting practices. This approach was employed by some U.S. firms in the early 1970s (for example, the Bank of America's Social Program Management and Quaker Oats' 1973 Social Progress Plan). The important contribution of this recent social reporting effort by German firms is the preparation of the Sozialrechnung (social accounts statement) and Wertschoepfungsrechnung (value-added statement). These statements attempt to present the firm's social performance in the perspective of an interaction of corporate goals and interests of the firm's constituencies.

The social accounts statement was first developed in 1972 by STEAG, a mining company. It has now become an important statement for social disclosures by almost all German companies producing social reports. The objective of this statement is to report activities which impact on important constituencies of the firm. Deutsche Shell considers the following as important constituencies: employees, investors (financiers), community, and the firm itself in terms of capital maintenance. The community constituency can be further divided into such categories as government, the physical environment, and the social environment.

The information contained in the social accounts statement is primarily obtained from the income statement. However, some items are presented in greater detail, so as to provide more information than that which would be available from the income statement alone. The social accounts statement from Deutsche Shell's 1977 annual report is reproduced in exhibit 1.

The objective of the social accounts statement appears to be to highlight the firm's activities in relation to its constituencies. The employees' constituency received special emphasis. The items in each section are referenced to the narrative section of the report on corporate goals and also to the income statement. This statement goes beyond the traditional narrow presentation of financial analysis related to the profitability and liquidity of the firm. It states expenditure items in terms of their purpose. The primary source of information, however, is the income statement. In addition to the reorganization of available information, the statement does not provide additional information; it merely emphasizes the firm's costs related to employees and other constituent groups. Thus, it can be argued that presentation of detailed cost information is not likely to

Exhibit 1. Deutsche Shell's Social Accounts Statement*

I. Firm and employees	Report page	Income statement position	Cost (000 DM) 1977	Cost (000 DM) 1976
1. Wages	37	16	68,087	64,392
Salaries	37	16 & 26	146,153	138,054
			214,240	202,446
2. Benefits accruing directly to employees now working in the firm				
(a) Christmas bonuses & gifts		16	17,693	16,153
(b) Vacation pay		16	6,539	6,154
(c) Contributions to savings plans		16	3,021	3,042
(d) Others (rebates, etc.)		1,18,26	1,208	1,146
(e) Premiums for improvement—suggestions	42	16	141	106
(f) Bonuses for work anniversaries		16	528	550
(g) Special recognition of birth		18	26	28
(h) Special recognition of marriage		18	144	157
(i) Rent subsidies/Travel grants		16 & 26	639	604
(j) Premiums resulting from competitions	39	16	604	532
(k) Firm's 75th anniversary	37	16 & 26	13,776	—
			44,319	28,472
3. Benefits accruing directly to employees who are no longer with the firm				
(a) Pension payments	40	18	32,366	30,068
(b) Christmas bonuses & gifts	40	18	942	965
(c) Firm's 75th anniversary	37	18	3,072	—
			36,380	31,033
4. Benefits accruing indirectly to employees				
(a) Employer's contribution to pension, health and unemployment insurance		14 & 17	24,960	23,302
(b) Contributions to trade unions		17	1,936	1,866
(c) Costs for company health plans	41	Misc.	708	651
(d) Insolvency insurance inheritance tax insurance		18	1,089	941
(e) Payments for pension reserves		18	57,559	52,312
			86,252	79,072
5. Benefits accruing to employees collectively				
(a) Education and training	34-36	Misc.	3,455	3,153
(b) Accident prevention	38/39	Misc.	2,500	2,500
(c) Company medical services	39/40	Misc.	958	941
(d) Employee information service	43	Misc.	321	287
(e) Lunches and hot drinks	41	Misc.	4,007	3,786
(f) Vacation homes	41	Misc.	100	88
(g) Subsidies to sport associations	41		496	496
(h) Work clothes		26	733	677

Exhibit 1. (cont.)

I. Firm and employees	Report page	Income statement position	Cost (000 DM) 1977	Cost (000 DM) 1976
(i) Counselling	44	Misc.	1,744	1,594
(j) Election costs to board of directors (employees' representatives)	43/44		57	—
			14,371	13,522
TOTAL I			395,562	354,545
Less double counting (Labor Costs and Depreciation)			(7,247)	(6,432)
			388,315	348,113

II. Firm and investors	Cost (000 DM) 1977	Cost (000 DM) 1976
1. Dividends	—	190,000
2. Bonus	—	100,000
3. Interest costs	48,228	48,861
TOTAL II	48,228	388,861

III. Firm and community	Report page	Income statement position	Cost (000 DM) 1977	Cost (000 DM) 1976
1. Firm and government				
(a) Taxes and levies				
EEV-taxes	50	24a	46,834	125,698
Other taxes	50	24b	1,046	297
LAG		24c	—	7,043
Promotion levy for German oil and gas	50	5	89,251	61,693
Utilized reserves for taxes			1,287	1,313
Not paid, but recorded		14	(5,484)	(8,509)
Tax liabilities from prior years				
			132,934	187,535
(b) General and special fees		26	6,406	5,790
(c) Receipts (subsidies/investment credits/credits)	28	14 & 26	(622)**	(29,446)
			138,718	163,879
2. Firm and public				
(a) Subscription to associations and institutes	51	26	4,509	4,370
(b) Grants	51	26	829	563
(c) Youth work	52/53	Misc.	800	770
(d) Publications, etc.	50-53	Misc.	1,924	1,264
(e) TS-partner-training	36	Misc.	2,213	2,453
			10,275	9,420

Exhibit 1. (cont.)

III. Firm and community	Report page	Income statement position	Cost (000 DM) 1977	Cost (000 DM) 1976
3. Firm and physical environment				
Expenditures for safety of environment	48	Misc.	60,800	54,100
TOTAL III			209,793	227,399
Less double counting (Labor cost and depreciation)			(21,005)	(17,304)
			188,788	210,095

IV. Firm and physical capital maintenance/strengthening			Cost (000 DM) 1977	Cost (000 DM) 1976
1. Cost for research and development	30-32	Misc.	19,700	16,400
2. Capital maintenance (depreciation)		19	233,809	274,609
3. Development of reserves		30 & 31	—	(49,617)
4. Profit/loss carried forward	14	29	(34,568)	(19)
TOTAL IV			218,941	241,373
Less double counting (Labor costs and depreciation)			(10,967)	(8,945)
			207,974	232,428

*Author's translation from annual report.
**This includes adjustments for investment credits for tanker "Lottia."

provide a suitable basis for the evaluation of the firm's social performance. The statement is useful, however, to the extent that it provides detailed information on the firm's activities relating to employee welfare, and might also facilitate comparative analysis of the firm's activities for employees in relation to other contituencies.

VALUE-ADDED STATEMENT IN SOCIAL REPORT

The value-added statement is another important addition to traditional statements. The primary objective of this statement is to highlight the firm's contribution to society determined on the basis of value increment. This statement also reports the distribution of value-added amounts to various constituencies.

The value-added statement consists of two parts. Part one is based on the value generation process and describes sources of value to the firm. These sources include sales revenue, changes in inventory, and self-constructed assets. From the total revenues, the material costs, depreciation, and other costs paid to outsiders are deducted. The

second section is based on the value distribution process and describes how values created in the firm are distributed to the firm's various constituencies. Information contained in this statement is obtained from social accounts statements and traditional financial statements. Deutsche Shell has expanded the value-added statement to include details on the firm's performance. This is done to reconcile the social accounts statement with the financial statements. Deutsche Shell's performance value-added statement from the 1977 annual report is reproduced in exhibit 2.

Part one of the statement describes gross and net performance. In part two, distribution of performance to four constituencies is shown. The performance statement is connected with the value-added statement by adjusting depreciation and performance from the preceding periods.

Exhibit 2. Deutsche Shell's—Performance—Value-added Statement*

Source of performance	*Income statement position*	*1977* (000 DM)	*1976* (000 DM)
Sales proceeds	1	8,348,446	8,724,346
Changes in inventories	2	91,240	84,811
Other capitalized company-produced assets	3	5,358	4,506
Income from profit-carrying contracts	7	59,136	161,368
Income from investment/participation in other firms	8	1,107	897
Income from other financial investments	9	4,665	3,337
Interest income	10	6,578	11,633
Income from assets reductions	11	1,756	4,771
Income from reductions in values	12	676	403
Income from dissolving reserves and other positions related to reserves	13	1,723	12,334
Other income	14	281,794	271,171
Firm's performance		8,802,479	9,279,517
Costs for direct and indirect materials	5	(6,884,848)	(7,058,923)
Depreciation and changes in financial investments	20	(52,312)	(41,083)
Loss from reductions in current assets	21	(5,968)	(3,100)
Loss from reductions in plant & equipment	22	(5,498)	(7,297)
Costs from assumption of losses	25	(30,910)	(26,998)
Adjustment in special positions related to reserves	25a	(1,087)	(5,530)
Other costs	26	(988,561)	(995,482)
Net performance		833,305	1,141,164
		(11,667)**	

Exhibit 2. (cont.)

Performance for	*1977 (000 DM)*	%	*1976 (000 DM)*	%
Employees	388,315	46.6	348,113	30.8
Investors	48,228	5.8	338,861	30.0
Community	188,788	22.7	210,095	18.6
Firm	207,974	24.9	232,428	20.6
Distribution of performance	833,305	100.0	1,129,497	100.0
Connection with the value-added statement	*1977* (000 DM)	%	*1976* (000 DM)	%
Separation of earlier performance from performance distribution				
From depreciation	(233,809)		(274,609)	
Other earlier performances	(161,211)		(93,634)	
Value-added	438,285		761,254	
Distribution of value-added to				
Employees	376,745	86.0	338,991	44.5
Investors	48,228	11.0	338,861	44.5
Community	47,880	10.9	133,038	17.5
Firm (reinvestment)	(34,568)	7.9	(49,636)	(6.5)
	438,285	100.0	761,254	100.0

*Author's translation from annual report.
**Subsidy from government, not included in the income statement.

The usefulness of the value-added statement has been questioned in German accounting literature. As previously explained, the statement primarily restructures financial statement items and highlights sources for value creation and distribution of created value to different constituent groups. It has been argued that this statement does nothing more than show a firm's contribution to the GNP. Though this statement is receiving greater attention in Germany, its usefulness in reporting and explaining the firm's social performance evaluation is limited.

CONCLUSION

Although social reporting in Germany today is still not as comprehensive as Abt's social balance sheet and income statement of 1975, it is unique in its structure. Social accounting disclosures by German firms have become an integral part of German corporate annual reports. They contain detailed information on the firm's economic and social goals. The statement of social accounts and the value-added statement present comparative information on the firm's financial interaction with important constituencies.

The firm's activities in relation to the employee constituency, however, receive special attention in these disclosures. This emphasis on employee relations may be due to the following reasons. The state of the art on the reporting in this area is probably more advanced for other social accounting areas. Furthermore, the business-political environment in Germany may have influenced this reporting. Worker participation in corporate decision making (Mitbestimmung) is a widely accepted phenomenon, and unions play an important role in this process.

Physical and social environmental issues have not attracted much attention in the social accounting disclosures in Germany. These issues are discussed mainly by disclosing actual expenditures relating to the abatement of pollution and social contributions. Although the objective of Deutsche Shell's statement has been to report the social impact of the firm's activities, it has failed to do so. Social costs and benefits resulting from activities have not been presented in the statement, and the negative impact of the firm's activities has been ignored. These issues have probably been omitted on the grounds of practicality. The usefulness of social information will remain limited, however, unless suitable methods to quantify and present social impact are developed.

Despite this criticism, the social reports currently published by German firms represent progress in the development of social accounting disclosures. The experience of German firms may have an impact on social accounting disclosures in other European countries. The concepts developed in Germany may be modified and refined to suit the environment of other countries. The German social disclosure practices also need to be evaluated critically to help in the development of an optional disclosure format in other countries.

A Cross-Sectional Analysis of Qualified Audit Reports

MICHAEL FIRTH*

The two major types of audit qualification encountered in the United Kingdom are those relating to noncompliance with Statements of Standard Accounting Practice (SSAPs) and those relating to uncertainties. Companies are expected to adopt SSAPs in preparing their annual accounts and if they do not, the auditor is then required to qualify the audit report. Uncertainty qualifications arise when the auditor has some doubt regarding, for example, whether a firm can be regarded as a going concern or has some doubts on the valuation of assets.

Recently there has been a substantial increase in audit qualifications in the United Kingdom. Three major reasons for this growth are the following.

1. The growing number of SSAPs in issue.[1] This, of course, increases the chances of a company not complying with at least one SSAP and thus receiving an audit qualification. Additionally, company finance directors have increasingly criticized the restrictive nature of SSAPs, and this has also contributed to the number of cases of noncompliance.
2. The financial and economic crises of the mid-1970s, which resulted in many companies facing significant liquidity and profitability problems. This situation, in turn, resulted in an increase in audit qualifications for going-concern reasons and for asset valuation reasons.

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[1]The first SSAP was issued in 1971; at present there are 14 in issue.

3. The increased publicity that has been given to firms that have become bankrupt even though possessing clean audit reports. For example, many auditors have received criticism from Department of Trade inspectors investigating the sudden collapse of major stock market-quoted companies, and these have been widely reported in the news media.[2] This adverse publicity and the growing concern over possible legal actions may have led the auditing profession to be more cautious, and thus more qualified reports may have resulted.

The purpose of the paper is to report the results of a research project which investigated the existence of common features relating to companies receiving audit qualifications which differentiated them from companies which did not receive qualified audit reports. Such an analysis may help us to examine some of the hypotheses that can and have been suggested to explain the occurrence of audit qualifications in the recent past. This, in turn, may be helpful to users of accounts who must evaluate the impact of an audit qualification in their decision making. If any strong associations are found between the occurrence of audit qualifications and some financial feature(s), this might help us to predict future audit qualifications.

The research design uses a cross-sectional analysis approach in determining whether there are any common features (such as the firm of auditors involved, size, industry, earnings performance, and share-price performance) which differentiated companies who received audit qualifications from those who received clean audit reports. The empirical examination used audit qualifications appearing in 1976, a year of peak activity.

The results of the study are compared with those of similar research conducted in the United States. Warren made a cross-sectional study of uncertainty qualifications reported in the first four months of 1973 in which he addressed the question of the uniformity of auditing standards.[3] A number of other studies[4] have analyzed the characteris-

[2] I. H. Davison, "The Future of Auditing Is in Our Own Hands," *Accountancy* (July 1977).

[3] C. S. Warren, "Uniformity of Auditing Standards," *Journal of Accounting Research* (Spring 1975).

[4] W. G. Bremser, "The Earnings Characteristics of Firms Reporting Discretionary Accounting Changes," *Accounting Review* (July 1975); B. E. Cushing and E. B. Deakin, "Firms Making Accounting Changes: A Comment," *Accounting Review* (January 1974); M. L. Gosman, "Characteristics of Firms Making Accounting Changes," *Accounting Review* (January 1973); idem., "Firms Making Accounting Changes: A Reply," *Accounting Review* (January 1974); Warren, "Auditing Standards"; and idem., "Characteristics of Firms Reporting Consistency Exceptions—A Cross-Sectional Analysis," *Accounting Review* (January 1977).

tics of firms receiving consistency qualifications. These qualifications relate to changes in accounting methods made by companies from the previous year.

The next section of the paper discusses some hypotheses that have been used to explain the occurrence of audit qualifications. The next section also suggests financial characteristics which may help us to assess the validity of these hypotheses in explaining audit qualifications in 1976.

HYPOTHESES CONCERNING REASONS COMPANIES RECEIVE AUDIT QUALIFICATIONS

Companies do not like to receive qualified audit reports and the adverse publicity this brings them. Additionally, it has been shown that uncertainty-qualified audit reports have a distinctly negative impact on investors and bankers, although the evidence relating to SSAP qualifications indicates a much lesser effect.[5] It is not unusual, therefore, to find that companies will expend much effort to satisfy the auditors' doubts. Despite these efforts, audit qualifications do appear, and most are unavoidable (for instance, uncertainty qualifications where the firm cannot satisfy the auditors' doubts no matter how much effort is spent), although some are avoidable (mainly SSAP qualifications). Hypotheses relating to why some companies received qualifications while others did not will be presented.

SSAP Qualifications

1. The usual reason given by companies for not complying with a particular SSAP is that to do so would result in the annual accounts showing an erroneous view. These companies would prefer to use what in their opinion is a better accounting practice and to incur the audit qualification. SSAPs have been developed with the average company in mind, and no exceptions are granted for specific industries or circumstances. Thus, if a specific SSAP is not relevant for a particular industry, we might expect to see a large number of firms within that industry receiving qualified audit reports. SSAP qualifications may also be associated with delays in the publication of the annual accounts; this represents the time spent attempting to resolve differences between the client company and the auditor.
2. Another possible reason for noncompliance with an SSAP is that the alternative accounting treatment being used may result in a better

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[5] M. A. Firth, "Qualified Audit Reports: Their Impact on Investment Decisions," *Accounting Review* (July 1978); and idem., "Qualified Audit Reports and Bank Lending Decisions," *Journal of Bank Research* (Winter 1979).

picture of the company's position (for example, it may show higher profits or reduced losses). Since there may be many reasons for a company wanting to show a better picture (even if only temporary), the company may be willing to trade off the negative impact of an audit qualification for the "benefits" which they perceive will flow from showing a higher level of profits, for instance. Given that most SSAP qualifications show profits as being too high under the alternative accounting treatment used, this reason is a real possibility, although no company has admitted to such. Unfortunately, there is no way in which this reason for noncompliance with SSAPs can be tested.

Uncertainty Qualifications

3. Some companies' annual accounts are qualified because the accounting records and procedures are incomplete in some way (such as destruction of accounting records or absence of internal control procedures) and the auditors have little or no confidence in them. Although such qualifications could happen to any company, they might occur more frequently in smaller companies because they have smaller resources and are likely to have less sophisticated accounting systems and smaller, or perhaps no, internal control procedures. Additionally, these types of qualification may well be associated with delays in the annual accounts being published (that is, the annual accounts being published later than in the previous year).

4. It is hypothesized that companies who have suffered poor financial results are more likely to receive uncertainty qualified audit reports because they may rely heavily on banking support (which may result in going-concern qualifications), and or there may be doubts on the value of their assets (for example, question as to whether inventories can actually be sold). Thus, companies which report losses, or reduced earnings-per-share results, may be more likely to receive audit qualifications. Likewise, a poor share price performance, which could indicate unexpectedly poor earnings results, may be associated with an audit qualification.

5. The presence of extraordinary items in companies' annual accounts may be associated with audit qualifications. The fact that an exceptional and material event has occurred may increase uncertainties in the financial position of the company (for example, the exceptional losses incurred when a factory is closed may lead the auditor to think that further costs might still be incurred).

6. There may be an industry impact associated with uncertainty qualified audit reports, that is, a specific industry (for example,

property) may experience a difficult period, with many companies reporting losses, and thus audit qualifications may be prevalent.

The Auditor

7. The specific firm of accountants involved in an audit may have some influence on the occurrence of qualifications. Research from elsewhere[6] has shown that individual auditors and firms of auditors reach different judgments in materiality decisions, and thus it is quite possible that one company could receive a qualified audit report from auditor A, while another, but identical, company may receive a clean audit report from auditor B. As noted earlier, the auditing profession has become concerned about the weight of public criticism and about the increased possibility of legal actions being brought, and some auditing firms may be taking more stringent views on materiality and other judgment matters.

8. The reasoning in the preceding paragraph may apply only to a certain set of companies. For example, auditors may be reluctant to qualify the accounts of a large-size company on the grounds that it may lose the audit work and the large fees that go with it. Thus, if an auditor begins to employ more stringent standards, these may first be effected against smaller companies. Other reasons for an association with size can be noted:

(a) Larger companies have more sophisticated accounting procedures and therefore the auditors may place more reliance on the annual accounts presented to them. Thus, again we would expect to find audit qualifications associated with smaller companies.

(b) A counter reason has been pointed out by Gosman[7] and by Warren[8]; they suggest the possibility that larger companies are more in the public light and thus auditors may be especially careful and more willing to qualify their audit reports (additionally, legal actions in respect to large companies would be more expensive!).

9. A case can also be made for auditors' tending to qualify the accounts of companies which have suffered a poor share-price performance. If auditors are concerned about possible litigation in respect to companies that become bankrupt, they may become more

[6]P. Frishkoff, "An Empirical Investigation of the Concept of Materiality in Accounting," *Empirical Research in Accounting: Selected Studies 1970, Journal of Accounting Research* (Supplement 1970). T. R. Hofstedt and G. D. Hughes, "An Experimental Study of the Judgment Element in Disclosure Decisions," *Accounting Review* (April 1977); and F. Neumann, "The Auditing Standard of Consistency," *Empirical Research in Accounting: Selected Studies 1968, Journal of Accounting Research* (Supplement 1968).

[7]Gosman, "Accounting Changes."

[8]Warren, "Auditing Standards."

cautious when dealing with companies which have had abnormally poor share-price returns.

RESEARCH DESIGN

Population

The sample population consisted of the largest 1500 stock exchange-quoted companies in the United Kingdom. The audit reports of these companies, released in 1976, were then examined. A total of 185 audit qualifications were found, and of these, 116 could be broadly categorized as uncertainty qualifications. The remaining 69 qualifications generally consisted of firms which had not followed recommended accounting practices as enunciated in Statements of Standard Accounting Practice.

The separation of audit qualifications into uncertainty and SSAP categories was thought necessary as they relate to fundamentally different auditor opinions, and the companies involved may have significantly different financial characteristics. (Warren's study in the United States also differentiated between types of audit qualifications. His groupings were uncertainty and consistency qualifications, and these had some contrasting cross-sectional characteristics.[9]) Previous research into audit qualifications in the United Kingdom showed that investors and bankers differentiated between uncertainty and SSAP qualifications.[10] Separate statistical analyses were therefore run for uncertainty and SSAP qualifications.

Another twenty-two companies had both uncertainty and SSAP qualifications, and this raised the problem of which grouping should be used. In the results reported later, such dual qualifications were omitted altogether. However, the analyses were also rerun where the qualifications were regarded as both an uncertainty and an SSAP qualification; however, this made no difference to the results and conclusions.

Research Methodology

The study used analysis of variance (ANOVA) to examine whether there was any relationship between the variables and qualified audit reports. ANOVA allows us to analyze direct relationships (for example, Coopers & Lybrand issues a higher percentage of qualifications than does Peat, Marwick, Mitchell) and interactive relationships (Price Waterhouse issues a higher percentage of qualifications for small

[9] Ibid.

[10] Firth, "Audit Reports," and "Lending Decisions."

firms which have losses in the current year, than does Touche Ross). Measuring interactive relationships is important because although, for instance, one auditing firm issues proportionately more qualified opinions than another, this may be due to the firm auditing an exceptionally high number of companies experiencing losses (making the assumption that companies incurring losses are more likely to receive qualified audit reports).

In addition to the ANOVA tests, the Mann-Whitney U test was also applied to the size, change in earnings-per-share, and share-price variables to determine whether there were any significant differences between qualified companies and those receiving clean audit reports.

Variables

A total of eight variables was extracted for each company in the sample population. These were then examined to see if they had any relationship or interactive relationship with qualified audit reports. The variables were chosen on the basis of their having some influence or association with qualified reports (see Hypothesis section) and so as to provide a comparison against similar research in the United States. The variables were as follows:

1. *Auditing firm.* To ascertain if a specific auditor was strongly associated with the occurrence of qualified audit reports, the names of the professional auditors were extracted. These were grouped into nine categories, eight relating to the eight major accounting firms (Arthur Young McClelland Moores; Coopers and Lybrand; Deloitte Haskins and Sells; Peat, Marwick, Mitchell; Price Waterhouse; Thomson McLintock; Touche Ross; and Whinney Murray) and one group relating to other auditors.

Gosman[11] and Cushing and Deakin[12] reported some differences between auditors in the United States when making consistency qualifications; in contrast, Warren found no significant relationships for either consistency qualifications[13] or uncertainty qualifications.[14]

2. *Size.* It has been hypothesized that size may have an association with the incidence of audit qualifications (Hypotheses 3, 8). The sample population companies were classified as large and small, depending on whether they were above or below the population

[11]Gosman, "Accounting Changes," and "Reply."
[12]Cushing and Deakin, "Accounting Changes."
[13]Warren, "Consistency Exceptions."
[14]Warren, "Auditing Standards."

median value for capital employed. An alternative definition of size was also analyzed. This related to whether the audit fee was large (above the median) or small (below the median). It can be used to provide some evidence on whether accounting firms are more reluctant to qualify the accounts of companies with large audit fees (Hypothesis 8).

Gosman[15] and Warren[16] found that larger-sized companies tended to have a statistically significant greater number of consistency qualifications than smaller companies[17] and vice versa for uncertainty qualifications.[18]

3. *Industry.* An analysis of the broad industry grouping of each company was made to determine whether audit qualifications had a higher relative incidence in some activities than for others (Hypotheses 1, 6). Thirteen industry groups were selected based on the *Financial Times* industrial subsections. The groupings were banking insurance and finance, breweries and entertainment, building materials and construction, chemicals and pharmaceuticals, engineering and electricals, food manufacturing and retailing, mining and oil, motors and distributors, newspaper publishing and packaging, property, stores, textiles, and others.

Warren found a significant industry impact for both uncertainty[19] and consistency[20] qualifications in the United States. Gosman,[21] and Cushing and Deakin[22] found no industry differences, however, in their studies of consistency qualifications.

4. *Extraordinary items.* The existence of extraordinary items may be associated with qualified audit reports (Hypothesis 5). Previous research in the United States has shown that the presence of extraordinary items tends to be associated with qualified audit reports.[23]

5. *Profit or loss.* The reporting of a net loss may be associated with a qualified audit report (Hypothesis 4). Warren found a significant relationship between companies reporting losses and those receiving audit qualifications.[24]

6. *Increase decrease in earnings per share.* For similar reasons as the "profit or loss" variable, it may be that firms experiencing decreases

[15]Gosman, "Accounting Changes," and "Reply."
[16]Warren, "Consistency Exceptions," and "Auditing Standards."
[17]Bremser, "Earnings Characteristics," found no significant relationships.
[18]Warren, "Auditing Standards."
[19]Ibid.
[20]Warren, "Consistency Exceptions."
[21]Gosman, "Accounting Changes," and "Reply."
[22]Cushing and Deakin, "Accounting Changes."
[23]Warren, "Auditing Standards."
[24]Ibid.

in earnings per share are associated with audit qualifications (Hypothesis 4). An examination of each company was therefore made of whether it increased its earnings per share over the previous year by more than 2 percent (defined as an increase), decreased its earnings per share (EPS) by more than 2 percent (defined as a decrease), or its earnings per share changed by up to plus or minus 2 percent (defined as no significant change). Another possible variable which could have been examined was to have recorded whether the change in EPS was above, the same as, or below the average for all companies.

Warren found a significant relationship between companies experiencing reduced earnings and those receiving audit qualifications.[25] Bremser found a similar relationship for consistency qualifications,[26] although Warren's own study on these types of qualifications did not.[27]

7. *Increase decrease in share price.* A share-price performance variable was included in the study since it could be hypothesized that companies suffering unexpectedly poor stock market returns may have greater uncertainty attached to them; thus, audit qualifications may be more frequent (Hypotheses 4, 9). The share-price performance for each company was ascertained by measuring the percentage difference between the actual monthly returns and the expected monthly returns over the twelve-month period prior to the release of the audit report.

The expected return $E(R_{jt})$ is derived from the market model relationship

$$E(R_{jt}) = \beta_j M_t$$

where β_j = the systematic risk coefficient of security j. This coefficient was calculated by regressing the monthly returns for security j on the monthly returns of the market index for a period of sixty months, ending twelve months prior to the audit qualification.

M_t = the return on the market index in month t.

If a company's risk-adjusted percentage change in share price came to over +2 percent, then it was termed an increase; if it was below −2 percent, it was termed a decrease, and if it was between +2 percent and −2 percent, it was termed no significant change.

[25]Ibid.

[26]Bremser, "Earnings Characteristics."

[27]Warren, "Consistency Exceptions."

8. *Increase decrease in the time taken to publish accounts.* The final variable related to whether it took a longer, shorter, or similar amount of time to publish the accounts after the year end than in the previous year. Various hypotheses (1, 3) have been suggested associating delays in the time before the annual accounts are published and the occurrence of qualified audit reports. Each firm was classified by whether it took over 5 percent (in the number of days) longer to publish its accounts (an increase), whether it took over 5 percent less (a decrease), or whether it took within plus or minus 5 percent (no significant change). Warren found a significant relationship between overdue accounts (those taking longer to appear) and uncertainty qualifications[28]; he found no such relationship for consistency qualifications, however.[29]

RESULTS

Two separate ANOVAs were run, one relating to uncertainty qualifications and the other to SSAP qualifications. A total of 1,409 companies (116 uncertainty qualifications and 1,293 unqualified reports) were included in the uncertainty ANOVA and 1,362 companies (69 SSAP qualifications and 1,293 unqualified reports) were included in the SSAP ANOVA.

Uncertainty Qualifications

1. *Auditor.* None of the main or interactive effects of the auditor were statistically significant. Thus, there was no evidence of any one firm of auditors or groups of auditors qualifying a significantly greater proportion of annual accounts. The breakdown of the percentage of audit qualifications by auditing firms is shown in column 2 of exhibit 1.

2. *Size.* Size was measured in two ways, one based on total capital employed, the other based on the audit fee. Neither variable was statistically significant, however, either as a main or an interactive effect. Thus, none of the "plausible reasons" for size being associated with the occurrence of audit qualifications (Hypotheses 3, 8) has received support. In particular, there is no evidence that auditors are more reluctant to qualify the audit reports of larger firms because of their large fees or because they possibly use more sophisticated accounting systems. The impact of size was also analyzed by the Mann-Whitney U Test. Again, no significant relationship between

[28] Warren, "Auditing Standards."
[29] Warren, "Consistency Exceptions."

Exhibit 1. Percentage of Audit Qualifications by Auditing Firms*

1	*2* *Uncertainty qualifications*	*3* *SSAP qualifications*
Arthur Young McClelland Moores	8.7	5.0
Coopers and Lybrand	9.2	5.5
Deloitte Haskins and Sells	7.1	4.0
Peat, Marwick, Mitchell	8.1	5.6
Price Waterhouse	7.4	6.1
Thomson McLintock	8.9	4.3
Touche Ross	8.2	4.8
Whinney Murray	8.0	5.2
Other	8.3	5.0
Overall	8.2	5.1

*The number of qualified audit reports given by an auditing firm as a percentage of all reports issued by them in the ANOVA population.

size and audit qualifications could be found for any of the auditor groupings.

3. *Industry.* The ANOVA failed to reveal any significant main or interactive effects of industry on audit qualifications. In contrast to American results,[30] there was no evidence to suggest that the British accounting profession applies different auditing standards to different industries or that audit conditions are significantly different across industries in the period studied.

4. *Other variables.* As hypothesized earlier (Hypotheses 1, 2, 4, 5, 9), the remaining variables of extraordinary items ($F = 35.62$, $p < .01$), profit or loss ($F = 13.62$, $p < .01$), increase/decrease in EPS ($F = 9.21$, $p < .01$), share-price performance ($F = 22.42$, $p < .01$), and the time taken to publish the annual accounts ($F = 6.11$, $p < .01$), were all highly significant at the .01 level. Thus companies which report extraordinary items, net losses, decreases in EPS, and which suffer a poor share-price performance, and whose annual accounts are late, are much more likely to receive an uncertainty qualified audit report than other companies. Apart from the share-price performance analysis (which was not examined in the United States), these results are similar to those found by Warren.[31] The Mann-Whitney U Test was also used to examine the percentage change in earnings per share and the percentage change in the risk-adjusted share-price performance of the population companies. The results showed that these items were

[30]Warren, "Auditing Standards."
[31]Ibid.

significantly associated with audit qualifications at the .01 level, and this is consistent with the ANOVA results.

The ANOVA results showed that there was no interactive relationship between the above items and the auditor, size, and industry variables. Not surprisingly, significant interrelationships were found between the reporting of extraordinary items, a decline in earnings per share, and a poor share-price performance. These variables all tended to be present together in uncertainty qualified audit reports.

SSAP Qualifications

The ANOVA results for SSAP qualifications again revealed no significant main or interactive effects for auditing firms. Column 3 of exhibit 1 reports the percentage breakdown of SSAP qualifications by the firm of auditors involved. Similar nonrelationship findings were also obtained for size and industry. Thus, although some industries supposedly have greater problems in implementing specific SSAPs, there was no statistically significant evidence of this in 1976. The results for auditors, size, and industry contrasted with some of the American research for consistency qualifications referred to earlier.

The profit or loss, increase/decrease in EPS, increase/decrease in share price, and the increase/decrease in time taken to publish annual accounts variables were all nonsignificant, contrasting sharply with the uncertainty qualifications where these factors were highly significant. Thus, the financial state of the company and the relative share-price performance of the company have no relationship with the incidence of SSAP qualifications. The Mann-Whitney U Test also verified these findings.

The only variable which was significant was that of extraordinary items. Here there was a significant relationship between companies reporting extraordinary items and the incidence of qualified reports ($F = 12.11$, $p < .01$). Some of the qualifications were related to SSAP 6[32] which defined what should be included in extraordinary items. Many companies have not complied with the SSAP because they have included items as extraordinary items which were outside the definition of the standard—hence the qualified audit report. Warren found a significant relationship in the United States between the reporting of extraordinary items and the receipt of a consistency qualification.[33]

[32]Institute of Chartered Accountants in England and Wales, "Extraordinary Items and Prior Year Adjustments," Statement of Standard Accounting Practice 6 (London: ICAEW, 1974).

[33]Warren, "Consistency Exceptions."

CONCLUSIONS

This study has used ANOVA techniques to examine whether there were any common, differentiating characteristics of firms receiving uncertainty audit qualifications and SSAP audit qualifications. In contrast to American research, the specific auditing firm, the size of the company, and the industry within which it operates were all found to be independent of receiving any type of audit qualification. However, uncertainty qualifications were found to be related to firms suffering poor financial performance; explanations for this have been discussed earlier. SSAP qualifications were not related to poor financial performance. The fact that there is some difference between uncertainty and SSAP qualifications is consistent with earlier research concerning audit qualifications in the United Kingdom, which showed that investors viewed uncertainty qualifications with far more concern than they did SSAP qualifications.[34] Both uncertainty and SSAP qualifications were found to be associated with companies reporting extraordinary items in their annual accounts.

The results of the research were consistent with uniform auditing standards. Specifically, none of the nine auditor groupings were significantly associated with either uncertainty or SSAP qualifications (earlier research by Firth showed that the extent of share-price adjustments resultant on the release of qualified audit reports was independent of the auditing firm[35]; this is also consistent with uniform auditing standards). Further research into the cross-sectional characteristics of qualified audit reports could take the form of examining qualifications in other time periods, incorporating other variables for interactive analysis, and making a closer study of the uniformity of auditing standards, including further studies of the judgment processes of auditors.

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[34]Firth, "Audit Reports," and "Lending Decisions."
[35]Firth, "Audit Reports."

Information Content of Accounting Numbers: Evidence on Tokyo Stock Exchange Firms

KEIICHI KUBOTA*

INTRODUCTION

While ample evidence is available of the association between accounting numbers and stock market returns of American firms, little is known of this topic for Japanese firms.[1] This paper hypothesizes that accounting numbers published in Japan convey information on security returns. Empirical tests are conducted to determine the accuracy of this assertion. To formulate testable hypotheses in investigating the information content of accounting numbers, the Japanese capital market is assumed to be efficient in a semi-strong form and the publicly available information is presumed to be impounded into stock prices instantaneously after it is published.

Accounting numbers are said to have information content if these

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[1]Taya investigated the price movement of the eight most actively traded firms on the Tokyo Stock Exchange. In his study, the independence of price changes was statistically rejected, but the process was consistent with martingale models. See T. Taya, "A Study on the Movement of Stock Prices in the Tokyo Stock Exchange" (Ph.D. dissertation, University of California at Los Angeles, 1977). Kobayashi investigated thirty-one firms and found that the speed of adjustment to the new information was not as fast as with New York Stock Exchange firms. See S. Kobayashi, "Kabushiki-shijo no Korti-susei no Hyoka (1)," *Zaikai Kansoku* (February 1975): 22-29. Deakin, Norwood, and Smith also found a slight inefficiency of price changes around the announcement weeks of financial reports. E. B. Deakin, G. R. Norwood, and C. H. Smith, "The Effect of Published Earnings Information on Tokyo Stock Exchange Trading," *International Journal of Accounting* (Fall 1974): 123-36.

numbers convey information pertaining to firms' production-investment and financing decisions and their outcome, and accordingly can revise agents' beliefs on realized returns on securities. Ball and Brown found that accounting numbers tested have information content and that the publicly available information is instantaneously impounded into stock prices.[2] Specifically, they found that earnings-per-share numbers and net income numbers acquired a year in advance can help investors incur abnormal security returns based on this information. Furthermore, they note that cash-flow numbers, as approximated by operating income and net income numbers before nonrecurring items, do not outperform those two series in predicting security returns.

Gonedes tested whether a joint set of accounting numbers has information content significantly different from that contained in the net income. That is, "one can and may argue that information reflected in contemporary accounting reports is jointly determined by several or all of the accounting numbers presented in those reports."[3] To test this assertion, he chose a linear combination of financial ratios estimated with discriminant analysis and compared the performance of this set with other single financial ratios. The evidence he found is that the expected effect of the information reflected in each financial ratio and the linear model is no greater than the expected effect of the information reflected in earnings-per-share numbers. In a similar test by Kubota, a bankruptcy-prediction model estimated by the author was used as a surrogate for the linear combination of financial ratios, and he found that the linear model or other ratios did not significantly outperform earnings-per-share numbers, although the point estimate of the net income total sales ratio was a better predictor than the earnings per share.[4]

Note that in these studies, only pair-wise comparisons of security returns earned on the information from different accounting numbers were conducted, and among them, the most informative accounting numbers were selected with predictive ability criterion. However, Gonedes investigated the information content jointly reflected in accounting numbers with a more sophisticated methodology using

[2] R. Ball and P. Brown, "An Empirical Evaluation of Accounting Income Numbers," *Journal of Accounting Research* (Autumn 1968): 159-78.
[3] N. Gonedes, "Capital Market Equilibrium and Annual Accounting Numbers: Empirical Evidence," *Journal of Accounting Research* (Spring 1974): 26-62.
[4] K. Kubota, "Information Content of Joint Accounting Numbers" (Carnegie-Mellon University, November 1977).

Exhibit 1. Classification Table for Two Accounting Signals

	$\theta \leqslant 0$	$\theta > 0$
$\theta \leqslant 0$	$J_{1,1}$	$J_{1,2}$
$\theta > 0$	$J_{2,1}$	$J_{2,2}$

θ_i, θ_j = forecast error of accounting signals (first difference of Martingale process)

$J_{k\,l}$ = number of observations which fall into the category (k,l).

three numbers series: net income, extraordinary items, and dividends.[5] He found that extraordinary items and dividends numbers do not contain information more than that reflected in net income numbers. Similar tests were also conducted by Beaver and Dukes[6] and Patell and Kaplan.[7] Both studies found that cash-flow numbers do not add information content more than that reflected in net income numbers.

The current study investigates the information content jointly reflected in accounting numbers and dividend payment of Tokyo Stock Exchange firms of which numbers are publicly disclosed in accordance with Japanese accounting standards. Although the Tokyo Stock Exchange is the second largest in the world next to the New York Stock Exchange (NYSE), its disclosure level is far from complete compared to the American one. Hence, it seems interesting to detect the magnitude of the association between security returns and accounting numbers and get the insight into the usefulness of financial reports.

DATA AND DISCUSSION

The collection of the data is based on the tape initially produced by the Nomura Research Institute and expanded by Aoyama Gakuin University. The following criteria were used to select the data, and 298 firms satisfied the requirement.

1. The securities are listed on the Tokyo Stock Exchange for the fiscal years between 1961 to 74.

[5]N. Gonedes, "Corporate Signaling, External Accounting and Capital Market Equilibrium: Evidence on Dividends, Income and Extraordinary Items," *Journal of Accounting Research* (Spring 1978): 26-79.

[6]W. H. Beaver and R. E. Dukes, "Interperiod Tax Allocation, Earnings Expectations, and the Behavior of Security Prices," *Accounting Review* (April 1972): 320-32.

[7]J. M. Patell and R. S. Kaplan, "The Information Content of Cash Flow Data Relative to Annual Earnings: Preliminary Test" (Paper presented at the Stanford Accounting Seminar, August 1976).

2. Fiscal year ends on March 31 and September 31 semi-annually.
3. Monthly rates of return adjusted for dividends between the time period of January 1961 and December 1974 were available.
4. Accounting data were available between the time period of January 1965 and November 1974.

The list of accounting numbers used for the information content test is found in exhibit 2.[8] In the exhibit, note that the after-tax net income figures are reported as numbers before bonuses and dividend payments. These payments must be voted by a shareholders' meeting which is normally held two months after the end of the fiscal year. However, as far as the public disclosure is concerned, those numbers are reported at the same time as net income after taxes; the net income after taxes, bonus, and dividends is considered more useful in setting security prices at the time of disclosure.

Similarly, recompute cash-flow numbers, as approximated by the income number to which depreciation and other noncash expense items are added back. Along with this number, the net operating income, which is the number before interest expense, taxes, and extraordinary items, will also be included in the comparison of the information content. Exhibit 3 indicates the time series trend of income numbers and income ratios, and the net income shows some upward trend while other ratios are more stationary.

Secondly, with respect to the information content of dividend payments, unlike Gonedes' study[9] where Lintner's model[10] is used as a market expectation model, different market expectations models are suggested for Japanese firms. The "dividends-payout ratio" which is widely used in Japan is defined as the ratio of dividends per share to the *par value* of common stock per share. It is not equivalent to the dividends-per-share number in the sense that each share may have a different par value. However, since we are interested only in the change of accounting variables around their previous period's market expectations, under the assumption of the martingale process, the information content contained in those two variables is equivalent. Japanese firms tend to keep their dividend payout ratios and change

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[8]It should be noted that the information on dividends is the economic variable rather than the accounting signal in the sense that it is free of the particular accounting technique choice. Hence, we are testing the information content included in accounting reports versus economic variables when comparing the performance of accounting variables and dividend information information in predicting security returns.

[9]Gonedes, "Corporate Signaling," pp. 26-79.

[10]J. Lintner, "Distribution of Incomes of Corporations among Dividends, Regained Earnings, and Taxes," *American Economic Review* (May 1956): 55-61.

Exhibit 2. Accounting Variables Used for Information Content Test

A. Income number series

I. Net income numbers

- Net income after taxes
- Net income after taxes/Sales
- Net income after taxes/Total assets

II. Net income adjusted*

- Net income adjusted
- Net income adjusted/Sales
- Net income adjusted/Total assets

III. Cash-flow series**

- Cash flow/Sales
- Cash flow/Total assets

IV. Net operating income***

- Net operating income
- Net operating income/Sales
- Net operating income/Total assets

B. Dividends

- Total dividend payment
- Dividend payout ratio

C. Leverage ratios and other ratios

- Current assets/Current liabilities
- Total loans****/Total assets
- Retained earnings/Total assets
- Inventory/Sales

*Net income adjusted = net income after tax-bonus-dividends.
**Cash flow = Net income adjusted + Depreciation + Noncash expenses.
***Net operating income = Income before tax, interests, and extraordinary items.
****Total loans = Short-term bank loans + long-term bank loans.

those numbers rather infrequently (see exhibit 7). Hence, the expectation model we use for this variable will be the historic payout ratio, and any deviation from this historic trend will be hypothesized to have signalling implications. Note also that the average level of dividend payout ratios is slightly higher than 10 percent, as is seen in exhibit 4, which was a conventional payout ratio among Japanese firms. Then, this market expectations model will be compared with the estimated time-series model of total dividend payment with the predictive ability criterion.

Finally, it is well known that Japanese firms have higher debt-equity ratios than U.S. firms as demonstrated in exhibit 3 with the level of approximately 70 percent in book values with the increasing

Exhibit 3. Summary Statistics of the Average Series (n = 163)

*Year**	*Net income (million yen)*	*Net income/ Total assets (%)*	*Net income/ Sales (%)*	*Total debt/ Total assets (%)*
1955	140	1.45	2.12	57.07
	175	1.85	3.38	57.08
1956	198	1.81	3.05	57.74
	250	2.20	3.70	58.57
1957	310	2.38	4.10	59.79
	314	2.11	3.77	62.24
1958	277	1.74	3.37	61.15
	250	1.55	3.04	60.76
1959	289	1.66	3.29	61.20
	343	1.77	3.32	62.73
1960	413	1.83	3.48	64.04
	493	1.91	3.63	64.73
1961	551	1.88	3.70	66.28
	611	1.81	3.63	66.62
1962	679	1.76	3.72	66.20
	628	1.50	3.16	66.69
1963	620	1.44	3.29	67.03
	712	1.46	3.30	67.91
1964	703	1.29	2.68	68.92
	761	1.14	2.32	69.89
1965	742	1.10	2.49	70.06
	565	.707	1.35	70.55
1966	570	.732	1.27	70.58
	750	.918	1.83	70.65
1967	883	1.08	2.34	70.85
	1,027	1.33	2.70	70.90
1968	1,141	1.45	2.89	71.70
	1,257	1.53	3.02	72.02
1969	1,392	1.58	3.05	72.26
	1,548	1.57	3.09	72.36
1970	1,771	1.61	3.23	72.84
	1,837	1.50	2.95	73.18
1971	1,673	1.33	2.69	73.55
	1,310	.814	1.78	74.11
1972	1,246	.768	1.56	74.13
	1,443	.730	1.52	74.09
1973	1,856	.987	2.04	74.65
	2,448	1.12	2.26	75.62
1974	2,288	1.08	2.09	76.93
	1,909	.909	1.67	76.67

*Fiscal year ends on March 31 and September 31 semi-annually.

Exhibit 4. Distribution of Dividend Payout Ratio (n = 301).

End of fiscal year	*Lower than 10%*	*10%*	*Higher than 10%*
65 March	88	70	143
65 September	100	72	129
66 March	102	75	122
66 September	102	75	124
67 March	93	83	125
67 September	82	91	128
68 March	77	90	134
68 September	69	92	140
69 March	62	93	146
69 September	50	96	155
70 March	44	84	173
70 September	50	77	174
71 March	56	78	167
71 September	77	78	146
72 March	95	73	133
72 September	95	71	135
73 March	73	83	145
73 September	55	81	165
74 March	56	83	162
74 September	55	85	161

trend. The test of information content on this variable reveals any association between the abnormal return and the change in leverage ratios, although its implication is not clear-cut since there is no formal theory that connects the abnormal return and the financial structure.

TESTING METHODOLOGY

Under market efficiency, all publicly available information is instantaneously impounded into the equilibrium price of securities. Hence, the effect of any new inside or hypothetical information upon security returns is an unexpected one which had not been fully incorporated into the equilibrium price before this information arrived into the market. This association between the new information and the unexpected change in security returns is what we call *information content*, and the following methodology is used to detect this information content.

Let

$y_{i,t}$ = the accounting number of firm i that becomes publicly available at the end of period t;

$\theta_{i,t}$ = unanticipated change in the accounting number $y_{i,t}$ in period t;
$R_{i,t}$ = the return of the security i in period t;
$e_{i,t}$ = unanticipated change in the return of the security i in period t; and
$\phi_{m,t}$ = a set of publicly available information at the beginning of period t.

Define

$$\theta_{i,t} = y_{i,t} - E(y_{i,t}|\phi_{m,t}) \tag{1}$$

and

$$e_{i,t} = R_{i,t} - E(R_{i,t}|\phi_{m,t}). \tag{2}$$

Then, the study attempts to determine whether the unanticipated change in accounting signals, that is, the realization of $\theta_{i,t}$, is positively correlated with the realization of the unanticipated change in security return $e_{i,t}$. To test this assertion, the foreknowledge of the realization of accounting numbers by capital market agents is assumed as a hypothetical experiment, and it is inferred that this foreknowledge can be utilized by agents to earn excess returns over the equilibrium rate of return.

Let the market model be of the form (3),

$$\begin{aligned} R_{i,t} &= \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t} \\ E(\epsilon_{i,t}) &= O \\ V(\epsilon_{i,t}) &= \sigma \end{aligned} \tag{3}$$

where

$R_{m,t}$ = the monthly return of the value weighted portfolio.

Then, the estimated excess returns can be defined as follows.

$$e_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t}). \tag{4}$$

Under capital market efficiency, this excess return is a "fair-game" random variable, and its expected value is zero.

Since little evidence is available on the time-series properties of accounting numbers published in Japan, it seems necessary to investigate and identify the stochastic processes generating these series. However, to get the first approximation of the appropriate stochastic

process for each financial ratio listed in exhibit 2, we assume the process is the martingale of the following form:

$$\begin{aligned} y_t &= y_{t-1} + \eta_t \\ E(\eta_t) &= O. \end{aligned} \tag{5}$$

Then,

$$E_{t-1}(y_t) = y_{t-1}.$$

The difference between the realized accounting number and its ex ante market expectations derived from these models is called "forecast error" and denotes the unexpected change of the accounting numbers relative to prior periods' market expectations. When agents can gain access returns on the foreknowledge of this forecast error, accounting numbers are said to have information content. In other words, the new information $\theta_{n,t}$ is said to have information content if capital market agents revise their expectations after they receive a signal $\theta_{n,t}$ in addition to the already publicly available information set $\theta_{m,t}$.

Definition 1

$\theta_{n,t}$ is said to have information content, if

$$E(|e_i| \,|\, \theta_{n,t}, \phi_{m,t}) \geqslant E(|e_i| \,|\, \phi_{m,t})$$

where $|e_i|$ is the absolute value of e_i. When agents receive distinct signals from two information sets $\theta_{n,t}$ and $\theta_{k,t}$, we define the information content of the information system as follows.

Definition 2

$\theta_{n,t}$ is said to be more informative than $\theta_{k,t}$, if

$$E(|e_i| \,|\, \theta_{n,t}, \phi_{m,t}) \geqslant E(|e_i| \,|\, \theta_{k,t}, \phi_{m,t}).$$

For example, one may wish to test whether net income numbers before extraordinary items are more informative than net income numbers after extraordinary items and may find either of those to be more informative than another.

Definition 3

$\theta_{n,t}$ is said to have marginal information content relative to $\theta_{k,t}$, if

$$E(|e_i| \,|\, \theta_{n,t} \cap \theta_{k,t}, \phi_{m,t}) \geqslant E(|e_i| \,|\, \theta_{k,t}, \phi_{m,t}).$$

In this context, we use information on the net income and dividends as one information set and compare the performance of this information set with one of either information sets above. The use of intersection implies that this information set is defined only if two signals indicate the same signalling implications, for example, the positive change in the net income and dividend payment.

As introduced earlier, we assume capital market agents acquire sure and advance knowledge of accounting numbers to be released at a later date. If this information is acquired t months before the actual announcement of accounting data, agents will either buy or short sell securities according to the signalling implication of this information and will keep this portfolio position unchanged up to the announcement date when the information becomes publicly available. To measure the effect of this information, the following statistics are defined. Suppose B(S) is the set of securities purchased (sold short) and N is the total number of securities. Then, let

$$API = \prod_{t=-\tau}^{m} \frac{1}{N} (1 + \sum_{i \epsilon B} e_{i,t} - \sum_{i \epsilon S} e_{i,t}). \tag{6}$$

Since new information is impounded into stock prices as soon as it is publicly released under market efficiency, API is cumulated from six months before to two months after the announcement month allowing for a drift after the announcement month. As these residuals are cumulated from six months before the announcement date, the market model (3) is estimated using the preceding fifty-three monthly returns.[11] The null hypothesis that the accounting signal does not have information content is tested by comparing the APIs of these purchased and sold-short groups against the overall sample. To find which information system is most informative, we compare only the APIs based on different accounting signals. Furthermore, to derive the marginal information content, we partition the securities into four groups as in exhibit 1. That is, the securities are purchased only if two signals show the positive forecast errors and short sold with negative forecast errors. Then, the APIs of these portfolios are compared with the portfolio based on only one signal among these two different information sets.

[11] Any possible seasonality caused by using semi-annual reports is ignored in this study. However, the review of autocorrelated functions of original accounting number series not reported here shows the seasonality is small enough to be neglected in our test.

As for the significance test, Jaffe provides a relatively powerful test of the information content.[12] However, Marshall showed that APIs cannot test informativeness.[13] Although Patell proposed an alternative test[14] which is similar in essence to that of Beaver and Dukes,[15] it is unfortunately not a powerful test. In view of these observations, this paper will provide only the point estimates of APIs without statistical signifance tests. However, along with the discussion in the following section, it will become clear that this is not a drawback, given the empirical results of this study.

EMPIRICAL RESULTS

Exhibit 5 lists the estimated autocorrelated functions for four income number series where first differences were taken for all series. The autocorrelated functions and Box-Pierce Q statistics were estimated for all 163 firms using thirty-nine observations, and then the average values of each were computed and are reported in the exhibit. These estimated autocorrelation functions fall within two standard errors for all twelve differences, and the independence of disturbance terms can be thus inferred (see Nelson).[16] Also, Box-Pierce Q statistics show that one cannot reject the hypothesis that the residuals are white noise for all four series. This evidence indicates that, as a first approximation, we can use martingale process models for accounting income series to generate market expectations models. Market models were estimated to generate the expected returns of securities, and the result is shown in exhibit 6.

In the information content test, the securities are classified into the purchased group and the sold-short group based on the sign of the first differences of accounting numbers. Because a smaller number of firms changed either the total dividend payment of the dividend-payout ratio during the testing period, the numbers of observations for the case of dividend signals are very small as seen in columns 3 and 4 of exhibit 7. The results reported in exhibit 7 indicate that there is no substantial difference of information content contained among alternative income series, that is, the first twelve variables in columns 1

[12]J. F. Joffe, "Special Information and Insider Trading," *Journal of Business* (July 1974): 410-28.
[13]R. M. Marshall, "Interpreting API," *Accounting Review* (January 1975): 99-111.
[14]J. M. Patell, "The API and Model Comparison: Earnings Forecast vs. Naive Earnings Expectation Models" (Paper presented at the Stanford Accounting Workshop, August 1976).
[15]Beaver and Dukes, "Security Prices," pp. 320-32.
[16]C. R. Nelson, *Applied Time Series Analysis: For Managerial Forecasting* (San Francisco: Holden-Day, Inc., 1973).

Exhibit 5. Average of Estimated Autocorrelated Functions of All Firms

	Net income	*Net income adjusted*	*Cash flow*	*Net operating income*
r_1	.02375*	−.05004	−.001105	.000200
r_2	−.03311	−.04526	.01941	−.005111
r_3	−.1255	−.1225	−.05995	−.1521
r_4	−.08411	−.08276	−.02045	−.06071
r_5	−.06501	−.05803	−.02526	−.08113
r_6	.005178	.007717	.02558	.01913
r_7	−.01232	−.001096	−.001298	.001531
r_8	−.01513	.000537	−.01877	.005327
r_9	−.04374	−.03322	−.04559	−.05207
r_{10}	−.01207	−.01613	−.03921	−.02224
r_{11}	−.01229	−.01750	−.02410	−.01785
r_{12}	.02423	.03210	.02739	.03777
Box-Pierce Q	13.33**	12.388	13.374	15.226

Sample size = 163, T = 39 (20 years) and first difference.
*Two standard error = $2/\sqrt{T}$ = 0.320.
**Distributed with x^2 (12). x^2 = 18.55 at 10% significance level.

Exhibit 6. Market Model Estimation Result:Cross-sectional Average

	$\bar{\hat{\alpha}}$	$\bar{\hat{\beta}}$**
Jan. 62–May 66*	−0.001265	1.1487
July 62–Nov. 66	−0.001254	1.1430
Jan. 63–May 67	−0.001868	1.1209
July 63–Nov. 67	−0.000853	1.1803
Jan. 64–May 68	−0.000524	1.1947
July 64–Nov. 68	0.008436	1.1442
Jan. 65–May 69	0.002429	1.0719
July 65–Nov. 69	0.003291	1.0054
Jan. 66–May 70	0.004928	1.0253
July 66–Nov. 70	0.004268	1.0090
Jan. 67–May 71	0.003824	0.9706
July 67–Nov. 71	0.002201	0.9601
Jan. 68–May 72	0.003840	0.9592
July 68–Nov. 72	0.005010	0.9186
Jan. 69–May 73	0.004897	0.9120
July 69–Nov. 73	0.006694	0.9307

T = months, N = 298 firms
*$R_i = \alpha_i + \beta R_m + e$

**

$$\bar{\hat{\beta}} = \frac{1}{N}\sum_{i=1}^{N}\hat{\beta}$$

$$\bar{\hat{\alpha}} = \frac{1}{N}\sum_{i=1}^{N}\hat{\alpha}$$

Exhibit 7. Abnormal Performance Index for Nineteen Signals (As of Announcement Month)

	1 Purchased	2 Short-sold	3 Positive class n_1	4 Negative class n_2
Net income	1.0433*	.93223	3,543	1,225
NI/Sales	1.0716	.96654	2,229	2,539
NI/Total assets	1.0806	.95920	2,232	2,536
Net income adjusted	1.0478	.949383	3,285	1,483
NIA/Sales	1.0646	.95672	2,606	2,162
NIA/Total assets	1.0707	.95277	2,555	2,213
Cash flow	1.0395	.95582	3,377	1,391
CF/Sales	1.0471	.98884	2,131	2,637
CF/Total assets	1.0607	.97642	2,196	2,572
Net operating income	1.0496	.94264	3,250	1,518
NOI/Sales	1.0737	.95723	2,400	2,368
NOI/Total assets	1.0747	.95482	2,430	2,338
Total dividend payment	1.0140	.88437	1,416	326
Dividend payout ratio	1.0991	.88731	567	369
Current assets/Total assets	1.0332	.99004	2,727	2,041
Total loans/Total assets	0.9900	1.0369	2,255	2,513
Total debt/Total assets	1.0139	1.0155	2,929	1,839
Retained earnings/ Total assets	1.0276	.99975	2,540	2,228
Inventory/Sales	1.0047	1.0253	2,496	2,272

Sample size = 4768
*All securities · API = 1.0145

and 2 of exhibit 7. However, the dividend signals seem to be more informative than any of the income signals. For example, as of the announcement month, the purchased group (the sold-short group) of dividend-payout ratio signal earned 5.6 percent more (4.5 percent less) than the net income signal group. Exhibit 8 plots the monthly behavior of abnormal performance indices for both the purchased and sold-short groups based on dividend signal and income signal. The plotted line in the middle denotes the API for the total sample, and some upward drifts of the residuals are observed for the total sample. In every month, the abnormal performance index of dividend signal is superior to that of income signal as indicated by a comparison of exhibits 9 and 10. Also, note that most of the information contained in financial reports is reflected in security prices two to three months before the disclosure date, and, therefore, the evidence is consistent with a "semi-strong form" market efficiency.

Finally, we are interested in whether one can gain additional infor-

Exhibit 8. Abnormal Performance Index: Month Relatives

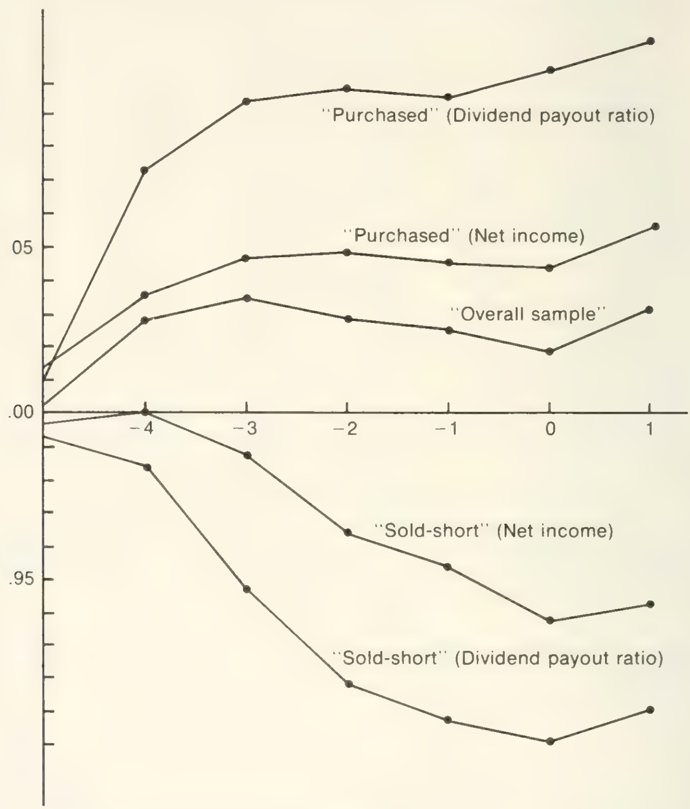

Exhibit 9. Abnormal Performance Index by Month Relatives: Net Income (n = 4,768)

Month	*Purchased*	*Short-sold*	*Total sample*
−5	1.0131	.99655	1.0089
−4	1.0367	1.0025	1.0279
−3	1.0469	.98401	1.0305
−2	1.0492	.96059	1.0259
−1	1.0472	.95158	1.0129
0	1.0443	.93223	1.0145
1	1.0532	.93897	1.0228
2	1.0758	.95976	1.0449
	(n = 3543)	(n = 1225)	(n =14768)

Exhibit 10. Abnormal Performance Index by Month Relatives: Dividend Payout Ratio

Month	*Purchased*	*Short-sold*	*Total sample*
−5	1.0126	.99177	1.0089
−4	1.0740	.98080	1.0279
−3	1.0926	.94559	1.0305
−2	1.0967	.91724	1.0259
−1	1.0196	.90538	1.0219
0	1.0991	.88731	1.0145
1	1.1107	.90675	1.0228
2	1.1291	.92511	1.0449
	(n = 567)	(n = 369)	(n = 4768)

mation by using the income signal and the dividend signal jointly; exhibit 11 shows this result. In this case, the securities are purchased (sold short) only if two signals show positive (negative) changes. Comparison of this exhibit with exhibit 9 indicates that the additional gain is 0.7 percent for the purchased group and 4 percent for the sold-short group, relative to the case when only the dividend-payout ratio signal is used. Although for every month the abnormal performance index of "two signal case" is superior to that of the dividend signal, note that the additional gain is not very large. From this result, one may infer that the dividend signal contains information content more than that reflected in the accounting numbers. However, as the number of observations of the dividend change group is small relative to the income group, it may be the case that the dividend signal further partitions the income group and thus brings in the magnitude effect of the income group by serving as a proxy variable for the

Exhibit 11. Abnormal Performance Index by Month Relatives: Net Income and Dividend Payout Ratio Used Jointly

Month	*Purchased*	*Sold-short*	*Total sample*
−5	1.0136	.98780	1.0089
−4	1.0767	.97603	1.0279
−3	1.0953	.92428	1.0301
−2	1.0983	.88265	1.0259
−1	1.0934	.86722	1.0219
0	1.1017	.84761	1.0145
1	1.1143	.86884	1.0228
2	1.1324	.89049	1.0449
	(n =539)	(n = 258)	(n = 4768)

income signal. This point will not be elaborated upon in this paper, but the reader should be cautious in interpreting this result.

CONCLUSION

The author found that the accounting numbers and dividend information have information content in predicting security returns with respect to Japanese firms. Moreover, it is inferred that the dividend signal contains information content more than that reflected in the accounting numbers. However, the choice of the particular signal among different versions of income numbers and ratios does not seem to matter in predicting security returns. Finally, most of the information contained in financial reports is reflected in security prices two to three months before the disclosure date and, therefore, the evidence is consistent with a "semi-strong form" market efficiency.

Interim Reports and Their Qualitative Evaluation

A. J. ROBB*

Only in recent years have interim financial reports received attention from academic and financial accountants. Much has been written of the principles underlying interim reporting,[1] the problems of reporting for a seasonal business,[2] and the effect of alternative measurement techniques.[3] Little consideration appears to have been given to methods of evaluating the quality of reports currently being issued. In the course of recent research, the author has developed a technique which deals with this problem.[4]

Two factors determine the quality of information in a report: (1) the timeliness of the report, and (2) the financial data disclosed. It is basic to any definition of information that a report should be timely. In fact, the object of presenting interim reports is to overcome the lack of timeliness of annual reporting. The less time taken between the end of the financial period and the issuing of the report, the more useful the report is likely to be. The research conducted in New

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[1]See, for example, J. W. Edwards et al., *Interim Financial Reporting* (New York: National Association of Accountants, 1972); D. Green, "Towards a Theory of Interim Reports," *Journal of Accounting Research* (Spring 1964): 35-49; A. Rappaport, "Towards a Theory of Interim Reports—A Modification and an Extension," *Journal of Accounting Research* (Spring 1966): 121-26.

[2]W. J. Bollom and J. J. Weygandt, "An Examination of Some Interim Reporting Theories for a Seasonal Business," *Accounting Review* (January 1972): 75-84.

[3]G. Fogelberg, "Interim Income Determination: An Examination of the Effects of Alternative Measurement Techniques," *Journal of Accounting Research* (Autumn 1971): 215-35.

[4]A. J. Robb, "Interim Reporting in New Zealand" (M.Com. Thesis, University of Canterbury, 1976).

Exhibit 1. Timeliness of Interim Reports

	Days from End of Half Year									
	Up to 30	*31-40*	*41-50*	*51-60*	*61-70*	*71-80*	*81-90*	*91-100*	*Over 100*	*Total*
Number of companies	1	7	4	8	9	4	5	0	2	40
Percentage	2.5	17.5	10.0	20.0	22.5	10.0	12.5	—	5.0	100.00
Cumulative	2.5	20.0	30.0	50.0	72.5	82.5	95.0	95.0	100.0	

Zealand analyzed forty interim reports[5] for timeliness. Exhibit 1 reports the results. However, it is not merely the speed with which a report is presented which makes it valuable to shareholders. Clearly the content is also important.

CONTENT

When annual reports are evaluated for award purposes, it is not uncommon to find as many as twenty-five items taken into consideration[6] in the evaluation. This does not mean that such items must always be reported or that their omission necessarily reduces the value of a report. In fact, one would intuitively expect interim reports to be briefer than annual reports. In any group of items, there are normally some which, although few in number, are proportionately more important than the remainder. It therefore seemed acceptable when examining the content of interim reports to use a smaller set of factors than for evaluating annual reports. Five or six factors were considered probably sufficient to report accurately the interim results. The factors selected were sales, costs, profits, certain balance-sheet information, and directors' comments. The reasons for this selection are discussed in the following sections.

Profit

Profit (or loss) for the period seems to be the most fundamental item to be disclosed. Profit is the raison d'être of virtually all businesses, and, despite the acknowledged difficulties of profit measurement in

[5]Of 272 companies listed on the New Zealand Stock Exchange, 67 (24.6 percent) voluntarily issued interim reports. The sample of forty reports thus represents 59.6 percent of the population. Half yearly reporting has since been made obligatory by the Stock Exchange Association.

[6]Refer to R. C. Olsson, "The Development of Criteria for Evaluating Annual Reports (with Particular Reference to the A. I. M. Annual Report Awards)"; and to D. J. Fraser, "Awards for Excellence in Company Reporting in Australia and Other Countries" (Both papers presented at the 1973 Convention of the Accounting Association of Australia and New Zealand. Reprinted as Papers A and B.)

some enterprises, profit earned in the interim period is as important to the investor as profit earned in the annual period.[7] For this reason, reference to the interim profit or loss was ranked of first importance and given a maximum of nine points. (Refer to the section "Weighting of Disclosure Methods" for further details of the weightings used for each factor.)

Sales and Costs

Because profits are determined jointly by sales and costs, and because changes in either or both will cause changes in profit, an informative interim report should disclose details of sales and costs. Since they are a necessary criteria for seeing profit levels and their changes in context, sales are a logical starting point for estimating future results of the entity, especially if probable market trends are known. They are also an objective and neutral measurement of activities during any period, and accordingly their inclusion is likely to be equally as valuable as details of interim profits. For these reasons, sales were given equal ranking with profits, that is, a maximum of nine points.

Costs, especially changes in costs, are frequently important to an understanding of profit changes, for example, the introduction of equal pay legislation or a change in the rate of payroll tax can drastically influence profits, particularly of firms whose profits are subject to price control. In the interim period, management probably has some ability to influence the reported costs, such as by inventorying an advertising campaign, or by deferring or accelerating repairs and maintenance. Costs are a less objective indicator of the interim periods' activity than sales and were accordingly weighted less. A maximum of six points was allocated to cost information. The three factors mentioned—sales, costs, and profits—all relate to the trading results of the interim period. Also of importance is the financial situation at the end of the interim period.

Balance Sheet

A shareholder who is given material balance-sheet information, such as changes in issued capital or in the working capital ratio, is better informed. Because trading data are a better indicator of interim activities and results than is the balance sheet, the maximum number of points for balance-sheet data was set at three points.

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[7]Refer to research by P. Brown and J. W. Kennelly, "The Information Content of Quarterly Earnings: A Clarification and an Extension" quoted in P. Brown, "The Impact of the Annual Net Profit Report on the Stock Market," *The Australian Accountant* (July 1970): 277; also P. Brown, "Interim Reports," *The Chartered Accountant in Australia* (August 1969): 4-8.

Directors' Comments

The recipient of the report, whether shareholder or professional analyst, is an outsider, and the financial information in the interim report is highly condensed (and perhaps somewhat tentative). For the report to achieve its full potential and for the recipient to be able to derive optimum benefit from the data supplied, the knowledge and experience of the directors are also relevant.

Suitable comments from the board of directors, particularly where some comment is given to the likely outcome of the second half of the year, can enhance an interim report. Because as much as one half (or even more) of this time may have elapsed before the interim report is published, the results of the second six months should be estimated with substantial accuracy. The points allocated to directors' comments were kept the same as for balance-sheet data, that is, a maximum of three points.

WEIGHTING OF DISCLOSURE METHODS

Four possible methods of disclosure were recognized for sales, costs, and profits. They were (1) complete and comparative, (2) ratio change, (3) nonquantified, and (4) no disclosure.

Complete and Comparative

The maxima referred to in the preceding section were allocated only where "complete and comparative" presentation was followed. For the four financial factors (including balance-sheet data), this involved the current actual figures and the actual figures for the same period last year (or alternatively the current actual figures plus the percentage change). Only if the directors commented on both the next six months and the probable overall result for the year were the maximum points allotted.

Ratio Change

Two-thirds of the maximum points for each factor were allocated where firms used the "ratio-change method" of disclosure. The disadvantage of this method is seen when two factors, such as sales and costs, are disclosed, but the result remains in doubt, for example, "Sales were up by 20 percent but costs rose by 25 percent." (What happened to profits?) The same proportion of points was allocated where only a summarized balance sheet was presented. Only one point was allocated if the directors comment only on the year's results and made no remarks about the second six months.

Nonqualified

One-third of the maximum points was allotted to companies making nonqualified reference to sales, costs, or profits. Examples were "sales equalled expectations" or "profits are ahead of budget." The same proportion was allotted where only isolated balance-sheet figures were disclosed and where the only comment from four directors was on the next six months' result with no indication of the probable outcome for the year.

No Disclosure

Where no reference was made to any of the five factors, no points were allotted. Exhibit 2 summarizes the way in which the points were allocated. In assigning points to the several factors, the main objective was to show the relative importance of each key factor rather than to arrive at any absolute measurement.[8] It is recognized that many other factors may be considered by analysts, such as the value of unfilled orders, or that some more sophisticated measurements may be made of one or the other of our key factors (directors' comments may have points allocated in proportion to the number of ratios and/or dollar amounts mentioned). These are but variations of our basic tool of analysis.

Using the points in exhibit 2, the contents of the forty reports ranged from one to twenty-eight points (refer exhibit 3).

QUALITY OF REPORTS

As was mentioned earlier, the quality of a report depends on the speed with which it is produced and its content. If these two factors are weighted equally, one may propose that

$$\text{Quality} = \text{Speed plus content}$$

$$\text{or } Q = \frac{1}{T} + C$$

that is, quality is in inverse relation to the time taken to produce the report but in direct relation to its content.

Naturally, some analysts may rank one of these two factors as more important. For example, a "risk preferer" would prefer to receive an interim report as speedily as possible knowing that the data might

[8]This type of analysis of key factors was used by the Lockheed Missiles and Space Company in their investigations into an optimal span of control. See H. Steiglitz, "Optimizing Span of Control," *Management Record* (September 1962): 121-29.

Exhibit 2. Points Allocated to Key Factors

Sales	No information as to gross revenue	0	Nonquantified comparison	3	Ratio change	6	Actual figure with last year's actual or percent of change	9
Costs	No information	0	Nonquantified comparison	2	Ratio change	4	Actual costs with last year's actual or percent of change	6
Profits	No information	0	Nonquantified comparison	3	Ratio change	6	Actual profits with last year's actual or percent of change	9
Balance-sheet information	No information	0	Selected figures from balance sheet, e.g., average shareholders' funds	1	Summarized balance sheet	2	Balance sheet broken into normal categories with comparative figures	3
Directors' comments	No comments	0	Comment on next six months only—no indication of year's results	1	Comment on year's results, no indication of next six months	1	Comment on both next six months and overall result for year	3

Exhibit 3. Analysis of Forty Interim Reports

	Company	*Points (Content)*	*Timeliness (Days)*
Finance industry	F1	10 (−0.04)	40 (1.36)
	F2	12 (0.25)	61 (0.15)
	F3	27 (2.39)	28 (3.02)
	F4	11 (0.10)	64 (0.00)
	F5	11 (0.10)	36 (1.81)
	F6	8 (−0.33)	55 (0.46)
Service industry	S1	8 (−0.33)	68 (−0.15)
	S2	4 (−0.90)	65 (0.00)
	S3	3 (−1.04)	79 (−0.45)
	S4	6 (−0.61)	77 (−0.45)
	S5	27 (2.39)	81 (−0.45)
Trading industry	T1	22 (1.68)	56 (0.30)
	T2	6 (−0.61)	35 (1.96)
	T3	6 (−0.61)	49 (0.75)
	T4	2 (−1.19)	46 (0.90)
	T5	12 (0.25)	59 (0.15)
	T6	12 (0.25)	78 (−0.45)
	T7	12 (0.25)	37 (1.96)
Conglomerate industry	C1	5 (−0.76)	81 (−0.45)
	C2	11 (0.10)	58 (0.30)
	C3	2 (−1.19)	70 (−0.15)
	C4	19 (1.25)	56 (0.30)
	C5	18 (1.11)	40 (1.36)
	C6	12 (0.25)	38 (1.66)
	C7	11 (0.10)	89 (−0.60)
	C8	17 (0.96)	33 (2.26)
	C9	16 (0.82)	61 (0.15)
Manufacturing industry	M1	5 (0.76)	88 (−0.60)
	M2	9 (−0.18)	50 (0.60)
	M3	5 (−0.76)	70 (−0.15)
	M4	7 (−0.47)	60 (0.15)
	M5	1 (−1.33)	61 (0.15)
	M6	1 (−1.33)	59 (0.15)
	M7	6 (−0.61)	51 (0.60)
	M8	8 (−0.33)	115 (−1.06)
	M9	1 (−1.33)	140 (−1.21)
	M10	8 (−0.33)	66 (0.00)
	M11	7 (−0.47)	76 (−0.30)
	M12	15 (0.68)	49 (0.75)
	M13	28 (2.54)	81 (−0.45)

1. Points were calculated according to exhibit 2.
2. Timeliness shown is the number of days from the end of the half year to the date on which the report was issued.
3. Standardized measurements are shown in parenthesis.

well be only tentative and not quantified; a "risk averter," on the other hand, would prefer to wait until more accurate information became available.

The risk preferer's quality function is likely to be in the form of

$$Q = x \frac{1}{T} + (1 - x)\, C \text{ where } x < 0.5.$$

and the risk averters' quality function is likely to be in the form of

$$Q = x \frac{1}{T} + (1 - x)\, C \text{ where } x > 0.5.$$

For our analysis, we maintained equality of speed and content, replacing $1/T$ by S to designate speed so that

$$Q = S + C.$$

STANDARDIZATION OF MEASUREMENT

To facilitate interindustry comparisons, we decided to standardize the measurements of content and speed so that the mean and standard deviation of each industry could be compared with the total surveyed. For convenience, we standardized the observations so that the total set of all observations, for both speed and content, had a mean of zero and a range of $\pm$ 0.5. Therefore, quality itself had a mean of zero and a range of $\pm$ 1.0. Exhibit 3 reports the standardized measurements alongside the raw data. Exhibit 4 indicates the standardization measures of quality for the five industry groups analyzed.

The finance industry was characterized by very speedy reporting and high content in reports. This resulted in the high mean value for quality. Finance companies showed the least relative dispersion about their mean. The industry leader published an audited set of accounts twenty-eight days after the end of the half year. The results shown support the assumption that an up-to-date information system is the lifeline of the finance industry in particular.

Service industry reports were of a much lower quality than were finance ($Q = -0.40$ compared with $+1.55$) and had a large relative dispersion ($V = 305.2$ compared with 119.7). Any major reason for the slowness of reporting by this group is difficult to pinpoint. It is unlikely to have been caused by difficulties, such as stocktaking, because trading companies were on average quicker reporters than service companies.

Exhibit 4. Summary of Measures of Quality of Interim Reports (in Standardized Units)

	Mean *Q*	*Standard deviation* σ	*Coefficient of variation*
Finance	1.55	1.85	119.7
Services	−0.40	1.22	305.2
Trading	0.80	0.96	120.3
Conglomerates	0.83	1.52	183.4
Manufacturing	−0.35	1.17	337.1

Trading companies had relative dispersion about this mean similar to finance companies, but the mean quality of their reports was lower (Q = 0.80 compared with 1.55). Marginally better in quality were the reports from conglomerate companies (Q = 0.83), but these reports showed a much greater dispersion about their mean (vo = 184/4).

Very low quality reports were issued by the manufacturing industry where the mean was −0.35. The greatest relative dispersion was also found here. The low quality of reports from the manufacturing and service industries raises the question of whether there is greater independence from the share market. In other words, do manufacturing and service companies have a pattern of infrequent equity issues in the share market? If so, does this result in a different attitude toward timely disclosure of financial information? Intuitively, this seems probable. In many manufacturing concerns, the opportunities for piecemeal expansion are limited and the capital expenditure function is discontinuous, unlike expansion in the trading industry where many firms have expanded by continual acquisition of other small trading units.

When one compares the operations of the manufacturing industry with those of the finance industry, one can more readily see that there is a greater need for finance companies to be attentive to the market with a regular flow of information if the finance company is to remain in a competitive position for further reinvestment of funds from the public. On the other hand, provided that a manufacturing company regularly services its existing debt and prudently ploughs back sufficient earnings, there is less need to report swiftly and in detail the results of a period since these will not have any immediate effect on finances available to the manufacturing company. Because

of the nature of the questionnaires, it was not possible to pursue this line of thought in any further detail.

CONCLUSIONS

Given that for most companies the content of interim reports must be less detailed than annual reports, we believe that exhibit 2 is a practical method of recognizing the relative importance of five factors which contribute to an informative report and the manner in which they are reported. We see little benefit in attempting to quantify a quality-function equation for "risk preferers" and "risk averters" at this stage. Indeed, after reading G. G. Blakely's comments on the irrationality of investors,[9] we question the wisdom of any form of logical investigation into business activities. Accepting a one-for-one trade off of content and speed, our research showed widely varying standards of reporting. Leading industry groups were finance, followed by conglomerates and trading. Manufacturing and services showed very low quality reports on the average, although within each group there were one or two companies which did produce reports of high quality.

The existence of such industry leaders prompts the thought that the management in such firms appears to have a different attitude toward disclosure and may place greater-than-average reliance on an up-to-date accounting system. One could speculate that such firms are rapidly expanding and actively pursuing a definite development program. An analysis of the reports of such companies over a series of years to establish whether there existed any perceptible change in the quality of their reports would be interesting.

The methods of analysis of interim reports used here permit such time series analysis. Interim reports will undoubtedly change from year to year as new requirements become mandatory or appropriate. If the quality of interim reports is to be improved, then there is a need for a consistent and logical method of appraisal to be applied. We believe that the tool we have developed fulfills such a need.

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[9]G. G. Blakely, "The Naked Investor, A Study in Non-Reason," *The Investment Analyst* (May 1972): 21-27.

Financial Statement Disclosure and Corporate Law: The Canadian Experience

GEORGE J. MURPHY*

The changes that have taken place over time in Canada relating to the financial statement disclosure requirements of Canadian corporate law have had a variety of sources of influence. These influences have come from both England and the United States as well as from within Canada. Canadian legislation has at times been ahead of and at other times lagged behind English and American legislation. The purpose of this paper is to chronicle the changes in legislated financial statement disclosure requirements and to indicate, where possible, the source of the influences which gave rise to those changes. The evolution will be seen to reflect the English and American influences but have found a uniquely Canadian resolution—one which may have important implications for the profession in Canada.

Apart from the relevant incorporating statutes and regulations, evidence for the study was sought in legislative debates, proceedings of governmental committe hearings, briefs and submissions made by various parties to committees of enquiry, and in the considerable professional, academic, and financial literature. Since the provincial Ontario legislation has tended to lead the federal Canadian legislation, both jurisdictions were examined.

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1877 TO 1917

On the federal Canadian level, the first disclosure provision requiring that ". . . directors of every company lay before its shareholders a full and clear printed statement of the affairs and financial position of the company at or before each general meeting . . ."[1] was enacted in 1877. The more specific requirement that such statements be presented annually was incorporated in the 1902 Act.[2] Many federally incorporated companies, prior to the mandatory presentation of the profit and loss statement in the legislation of 1917, interpreted these provisions as applying only to the balance sheet.[3]

Ontario has been the center of commercial and financial activity in Canada, and it is therefore not surprising to find its legislation well ahead of the federal jurisdiction. The Ontario legislation of 1907 and 1953 are outstanding examples of this leadership. Even the earliest provincial legislation of 1897 seemed to anticipate the modern emphasis of the income statement over the balance sheet by requiring the preparation of a statement of "income and expenditure."[4] Indeed, an audited balance sheet was to be presented at the annual meeting only if the by-laws of the company so directed. The Ontario Companies Act of 1907, in addition to requiring the statement of income and expenditure and the audited balance sheet, specified certain disclosures relating to the balance sheet.[5] These provincial requirements are detailed in exhibit 1 because with respect to the provision of the income statement and the detail to be included in the balance sheet, they are the earliest significant corporate disclosure requirements of any English, American, or Canadian jursidiction. With additional requirements relating to disclosure of values received for shares issued and of amounts amortized in respect to fixed assets and goodwill, the 1917 federal legislation[6] is a direct copy of the 1907 Ontario provisions.

An understanding of the reasons for the early prominence of Canadian legislation is not wholly complete. The inspiration of the 1907 Ontario legislation is attributed to the recommendations of the Institute of Chartered Accountants of Ontario by T. Mulvey, who had been both the federal under secretary of state and the Ontario assistant

[1]Canada, Statutes, *Canada Joint Stock Companies Act*, 1877, 40 Vict., ch. 43, sec. 87.
[2]Canada, Statutes, *The Companies Act*, 1902, 2 Edward VII, ch. 15, sec. 88.
[3]See, for example, various annual anthologies of financial statements in *The Annual Financial Review—Canadian* (Toronto: Houston's Standard Publications 1901-1916).
[4]Ontario, Statutes, *The Ontario Companies Act*, 1897, 60 Vict., ch. 28, secs. 75 and 84.
[5]Ontario, Statutes, *The Ontario Companies Act*, 1907, 7 Edward VII, ch. 34, sec. 36.
[6]Canada, Statutes, *The Companies Act Amendment Act*, 1917, 8 George V, ch. 25, sec. 105.

Exhibit 1. Financial Statement Disclosure Requirements of the Ontario Companies Act, 1907

At such meeting the directors shall lay before the company

a) A balance sheet made up to a date not more than three months before such annual meeting.
b) A statement of income and expenditure for the financial period ending upon the date of such balance sheet.
c) The report of the auditor or auditors.

The balance sheet shall be drawn up so as to distinguish at least the following classes of assets and liabilities, namely:

a) Cash;
b) Debts owing to the company from its customers;
c) Debts owing to the company from its directors, officers and shareholders;
d) Stock in trade;
e) Expenditures made on account of future business;
f) Land, buildings and plant;
g) Goodwill, franchises, patents and copyrights, trademarks, leases, contracts and licenses;
h) Debts owing by the company secured by mortgage or other lien upon the property of the company;
i) Debts owing by the company but not secured;
j)*
k) Amount received on common shares;
l) Amount received on preferred shares;
m) Indirect and contingent liabilities.

*No entry for j) is given in the original act.

provincial secretary.[7] The Institute recommendations may well have drawn on the extensive optional disclosure requirements in the model articles, Table B, of the English Act[8] of 1856 and on the suggestions of the committee that made recommendations for changes in the English Act[9] of 1900. (Hatfield has acknowledged the significance of the model articles on American practices.)[10] Though the Engish Act of 1900 required a mandatory audit,[11] there was requirement neither for the provision of an income statement nor for any minimum details to be included in the balance sheet. The English Act of 1908 put forward only the very general requirement that a balance

[7]T. Mulvey, *Dominion Company Law* (Toronto: The Ontario Publishing Co., 1920), p. 54.

[8]Great Britain, Statutes, *Joint Stock Companies Act,* 1856, 19 and 20 Vict., ch. 47.

[9]H. C. Edey and Prot Panitpakdi, "British Company Accounting and the Law 1844-1900," in *Studies in the History of Accounting,* ed. by A. C. Littleton and B. S. Yamey (London: Sweet and Maxwell, 1956), p. 374.

[10]H. R. Hatfield, "Variations in Accounting Practice," *Journal of Accounting Research* (Autumn 1966): 172.

[11]Great Britain, Statutes, *Companies Act,* 1900, 63 and 64 Vict., ch. 48.

sheet, showing ". . . such particulars as will disclose the general nature of these liabilities and assets, and how the values of those fixed assets have been arrived at," must be forwarded to the Registrar of Companies.[12]

Sources of influence from within Canada are various. The Institute of Chartered Accountants of Ontario is likely to have had a strong self-interest in the mandatory audit provisions of the 1907 act. Revelations of the Royal Commission on Insurance[13] had alerted the financial community to abuses in corporate accounting practices. Similarly, the Ontario Conservative government of J. P. Whitney was certainly of a disposition to constrain the corporate "laissez-faire" attitudes of the day.[14]

At the federal level, several factors were influential in the promulgation of the 1917 Act: the concern for mergers and the profit in corporate promotions,[15] the rash of bankruptcies at the beginning of World War I,[16] the bank failures culminating in the bank legislation of 1913,[17] and the existence of a pattern for legislation in the Ontario Act[18] of 1907. Very likely, however, the single most immediate reason for the 1917 Act was the imposition of the Tax Acts of 1916[19] and 1917.[20] The mandatory audit provisions and the minimum disclosure requirements would provide a more consistent and comparable base upon which taxes could be levied. "Taxation equity" would also be satisfied by having a respected professional attest to the adequacy of financial statement disclosure. The complementary nature of the 1916-17 Tax Acts and the 1917 audit and disclosure provisions is implicit in several commentaries of that time.[21] No additional evidence was uncovered from any source—the financial press, legislative

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[12]Great Britain, Statutes, *Companies (Consolidation) Act*, 1908, 8 Edward VII, ch. 69.
[13]Canada, *Royal Commission on Life Insurance* 1907 (Ottawa: King's Printer, 1907).
[14]Witness the mining legislation, the formation of the publicly owned Hydroelectric Power Corporation and the government intervention in the bankruptcy of the Consolidated Lake Superior Company. C. W. Humphries, "The Political Career of Sir James P. Whitney" (Ph.D. Dissertation, University of Toronto, 1966), pp. 301-410; and J. Schull, *Ontario Since 1867* (Toronto: McLelland and Steward, 1978), pp. 125-78.
[15]A. Raynauld, *The Canadian Economic System* (Toronto: Macmillan Company of Canada, 1967), 149-50; and O. D. Skelton, *General Economic History of the Dominion 1867-1912* (Toronto: Publishers Association of Canada, 1913), pp. 259-61.
[16]M. C. Urquhart and K. A. Buckley, eds., *Historical Statistics of Canada* (Toronto: Macmillan Company of Canada, 1965), p. 659.
[17]Canada, Statutes, *The Bank Act*, 1913, 3 and 4 George V.
[18]Mulvey, *Dominion Company Law*, p. 54.
[19]Canada, Statutes, *Business Profits War Tax Act*, 1916, 6 and 7 George V.
[20]Canada, Statutes, *The Income War Tax Act*, 1917, 7 and 8 George V.
[21]See for example, Canada, *House of Commons Debates*, vol. 6, 1917, p. 5937; and J. Parton, "Merchandise Inventories and the Auditor's Responsibility Therefor," *Canadian Chartered Accountant* (October 1917): 99.

debates, economic and legal histories, or accounting literature existing in *The Canadian Chartered Accountant*—to indicate why this audit and disclosure legislation was passed at a time when the efforts of the whole country were devoted to the war. At the annual meeting in 1918, the president of the Canadian Institute drew attention to the passage of the act but made no further comment.[22]

1917 TO 1935

The noteworthy legislation in this period occurred at the federal level in 1934[23] and 1935.[24] Mandatory income statement disclosure related to directors' and executive officers' fees and salaries, depreciation, taxes, investment income, nonrecurring profits and losses, amortization of any asset, and interest on long-term debt. The transactions in the various surplus accounts must be disclosed and their year-to-year reconciliation demonstrated. Balance-sheet disclosure must include the valuation basis of receivables, investments and marketable securities, inventories, land, buildings and plant, and, if the fixed-asset valuation is based on appraisal, the date of the appraisal and the name of the appraiser. The preparation of consolidated statements, though long since used in practice, was now officially permitted. Where consolidated statements were not prepared, the investment in the shares of, and loans to, subsidiaries must be disclosed together with the treatment of their aggregate profits and losses.

Internal influences were likely of greatest importance on the 1934-35 Canadian legislation. Little concern for increased disclosure was evident during the 1920s when economic events were buoyant; however, with the fall in values relating to the stock market crash of 1929 and the depression of the 1930s, the Canadian public began to clamor for more information. The highly respected Professor R. G. H. Smails[25] and a study group of Queen's University professors[26] called for improved disclosure. Financial commentary, particularly *The Financial Post*, added to the clamor.[27] The immediate stimulus[28] for

[22]J. Hyde, "The President's Address," *Canadian Chartered Accountant* (October 1918): 93-103.

[23]Canada, Statutes, *Companies Act*, 1934, 24 and 25 George V, ch. 33.

[24]Canada, Statutes, *Companies Act*, 1935, 25 and 26 George V, ch. 33.

[25]R. G. H. Smails, "Directors' Reports—A Criticism and Suggestion," *Canadian Chartered Accountant* (September 1931): 101-3.

[26]Members of the Department of Political and Economic Science at Queen's University, "Financial Manipulation: A Project of Reform," *Queen's Quarterly* (May 1933): 274-77.

[27]"Audit Responsibility Urged in 1932 Statements," *Financial Post* (21 January 1933), p. 11. Also see *Financial Post* (24 June 1933), p. 12; (16 December 1933), p. 11, and (6 May 1933), p. 11.

[28]See Canada, *Senate Debates* (1934), p. 452.

the 1934 legislation was provided by the Conference of Commissioners on Uniformity of Legislation which had prepared draft legislation. Though reporting practices clearly needed improvement, most of the incentive for the legislation came from a need to correct abuses in corporate promotion and capitalization.[29] In 1931, the Canadian Institute of Chartered Accountants made proposals for uniform legislation relating to financial statements and also made a submission to the federal government for the 1934 legislation.[30]

Though the English Companies Act[31] of 1928 made mandatory the provision of an income statement, very little minimum disclosure was required in the financial statements beyond the need to specify directors' fees, the nature of the valuation of fixed assets, the treatment of subsidiary profits and losses, and the amount transferred to reserve accounts. It was only with respect to these last four items that the 1928 English legislation was in advance of the 1907 and 1917 Canadian legislation. The latter, on the other hand, required much more detailed information in the balance sheet than that of the English legislation. The 1934-35 Canadian legislation, as previously outlined, far exceeded the 1928 English legislation. Indeed, the provisions relating to the disclosure and reconciliation of surplus accounts were incorporated into Canadian law to remedy some of the English Act's deficiencies[32]—deficiencies that may well have permitted the 1929-30 English Royal Mail Steam Packet Scandal to occur. The differences in Canadian and English requirements are discussed at length here to dispel the general misbelief that, up to this time, the Canadian financial statement disclosure legislation was a mere copy of that of the English. While many aspects of the corporate audit provisions had indeed been copied from English legislation, the Canadian disclosure requirements were well ahead of their English counterparts.

Though no evidence was uncovered to demonstrate the specific effect of American influence on the Canadian legislation, there were many signs portending America's future pervasive influence on Canadian thought and practices. American theory and practices including *Uniform Accounting* (1917) and *Verification of Financial*

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[29]W. A. Macintosh, "Economics and Accountancy," *Canadian Chartered Accountant* (December 1932): 407. See also J. L. Ralston, "Discussions on Dominion Companies Act," *Canadian Chartered Accountant* (February 1935): 87; and Canada, *House of Commons Debates* (29 May 1934), pp. 3454-58.

[30]Neither report could be located by the writer.

[31]Great Britain, Statutes, *Companies Act*, 1928, 18 and 19 George V, ch. 45.

[32]R. G. H. Smails, "Students' Department," *Canadian Chartered Accountant* (September 1934): 283.

Statements (1929) were carefully reported on and extolled in the Canadian literature.[33] Professor Smails of Queen's University, a member of the Institute of Chartered Accountants in England and Wales, went so far as to recommend American texts as being theoretically superior to those of the English.[34] It is, however, quite likely that similar events in both America and Canada—stock promotion abuses and financial reporting inadequacies—gave rise to the virtually coincident 1934-35 Canadian and 1933-34 American legislation and that the Canadian legislation can therefore be explained without reference to the United States. In America, government intervention may have come as a sudden jolt, but in Canada, the vehicle of correction, the Companies Acts, had existed for many years and undoubtedly, by contrast, the 1934-35 legislation can be regarded as an evolution rather than a revolution.

1935 TO 1953

The Ontario Corporation Act[35] of 1953 constituted the first significant revision of that province's legislation since 1907. It is of major importance in the Canadian geneology because the disclosure provisions are so recognizably modern. They were virtually written by the Institute of Chartered Accountants of Ontario.[36] Once again, they were the direct model for the federal legislation which was to appear ten years later. The additional disclosure requirements related to the provision of much more informational detail in the income and retained earnings statements, the balance sheet, and the financial statement footnotes. Restrictions were placed, as well, on the wording and treatment of the various surplus and reserve accounts.

Apart from laying the foundations for modern disclosure requirements in Canada, this Ontario legislation is particularly interesting because of its inspiration. Though there was some concern[37] for improving the federal 1934-35 and particularly the 1907 Ontario provisions,[38] there were no important instances of business scandals

[33] C. A. Clapperton, "The Balance Sheet," *Cost and Management* (July 1927): 10.
[34] R. G. H. Smails, "Students' Department," *Canadian Chartered Accountant* (May 1935): 367.
[35] Ontario, Statutes, *The Corporations Act*, 1953, I Eliz. II, ch. 19.
[36] J. G. Glassco, "Accounting in a Modern World," *Canadian Chartered Accountant* (April 1955): 212. Glassco was president of the Canadian Institute in 1955.
[37] See, for example: W. G. Leonard, "A Plea for Greater Frankness in Financial Representations," *Canadian Chartered Accountant* (July 1942): 12-13; C. A. Ashley, "Uniform Accounting," *Commerce Journal* (April 1943): 1-9; W. F. A. Turgeon, *Royal Commission on the Textile Industry* (Ottawa: King's Printer, 1938), p. 127.
[38] R. G. H. Smails, "Students' Department," *Canadian Chartered Accountant* (September 1943): 197.

or corporate malfeasance to fan the flames of change as happened with the 1934-35 legislation. The author's conjecture that the legislation took place first because the provincial statutes had not been revised since 1907 and were now well behind the federal legislation, and second, because the model for revised disclosure had already been framed in the Canadian Institute of Chartered Accountants' Bulletin No. 1, is confirmed by the then secretary to the Select Committee on Company Law.[39] The secretary also indicated that the enquiry and revision were made possible at that particular time because

> the number of members of the House of the government party far exceeded the total number of members in the opposition parties and the use of the Select Committee gave Mr. Frost (the Premier of Ontario) an opportunity of keeping many of his backbenchers actively employed, especially between sessions when most of the work of the Select Committee was done.

The 1953 legislation illustrates the increasing influence of the Institutes of Chartered Accountants. The disclosure provisions of that Act were a virtual copy of the recommendations of the Ontario Institute to the Select Committee.[40] These recommendations were, in turn, based wholly on the Canadian Institute's first bulletin on recommended disclosure standards in 1946.[41] The substantive authorship of this bulletin is attributed to the Committee on Accounting and Auditing of the Ontario Institute.[42]

As English influence continued to wane in importance, American influence tended to increase. The disclosure provisions of the English Act[43] of 1947 went little beyond the 1934-35 Canadian legislation. However, the accounting standards and guidelines of the Securities and Exchange Commission (SEC) following 1935 and those of the American Institute commencing in 1939 were well ahead of Canadian thought and practice[44] and were invariably repeated and commented on favorably in *The Canadian Chartered Accountant.* The close

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[39] S. Lavine, in correspondence with the author, dated 10 June, 1970.

[40] The Special Committee of the Legislature of the Province of Ontario charged with the Revision of The Companies Act (Ontario) and Related Acts, *Proceedings*, vol. 15 (Oct. 6, 1952).

[41] *A Statement of Standards of Disclosure in Annual Financial Statements of Manufacturing and Merchandising Companies*, Bulletin #1 (Dominion Association of Chartered Accountants, 1946).

[42] J. R. M. Wilson, "Standards of Disclosure" (Address to Dominion Association of Chartered Accountants, Montreal, 11 September 1946).

[43] Great Britain, Statutes, *The Companies Act,* 1947, 10 and 11 George VI, ch. 47.

[44] See, for example, SEC Accounting Series Release No. 7, "Analysis of Deficiencies Commonly Cited by Commission in Connection with Financial Statements" (May 1938), reprinted in *Federal Securities Law Reports* (Washington: Commerce Clearing House, undated).

relationships between many American and Canadian professional accounting firms also served to highlight disclosure differences between the two countries.[45] The vehicle for this influence now became the Canadian Institutes as they carefully screened American thought and practices before making their own recommendations. Canadian commentators at times envied the incentive provided in America by the existence and activity of the SEC.[46]

1953 TO PRESENT

The most notable legislation of the 1960s was the Canada Corporations Act[47] of 1964-65 and the Ontario Securities Act[48] of 1966. The federal legislation initiated by the Senate[49] is, with a few additions, almost identical to the 1953 Ontario legislation. Though there were increasing signs of dissatisfaction with the inadequacies of corporate reporting,[50] neither the provincial nor federal legislation was the result of widespread notoriety or discontent. Senate debates acknowledged that the 1934-35 legislation was simply out of date and that the revision was copied from the existing Ontario legislation.[51] Similarly, the Kimber Committee[52] which made recommendations for the Ontario Securities Act changes was established not because of any particular grievance or scandal, but rather because of a concern that the law was in need of review.[53] Following the Kimber Report, the Ontario Securities Act was drastically revised, giving ongoing surveillance of Canada's chief exchange, the Toronto Stock Exchange, to the Ontario Securities Commission. Though this commission holds powers at the provincial-listed security level similar to those of the American SEC,[54] it has not created an elaborate financial statement review process, nor has it attempted to promulgate its own accounting guidelines.[55]

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[45]Howard Ross, of Touche Ross & Co., in correspondence with the author dated 21 August 1972.

[46]Glassco, "Accounting," p. 212.

[47]Canada, Statutes, *Canada Corporations Act*, 1964-1965, 13 and 14 Eliz. II, ch. 52.

[48]Ontario, Statutes, *The Securities Act*, 1966, 14 and 15 Eliz. II, ch. 142, Part XII.

[49]Senate of Canada, *Proceedings of the Standing Committee on Banking and Commerce*, 26 Parl., 1964.

[50]In response to which the Canadian Institute issued the first of its recommended standards on disclosure, Bulletin No. 1, in 1946.

[51]Canada, *Senate Debates* (1964), pp. 515-18.

[52]Attorney General of Ontario, *Report of the Attorney General's Committee on Securities Legislation in Ontario* (Toronto: Queen's Printer, 1965).

[53]J. R. Kimber, in correspondence with the author, dated 3 July 1970.

[54]See Ontario, Statutes, *The Securities Act*, 1966, 14 and 15 Eliz. II, sec. 139, Part XIV.

[55]Some exceptions do exist. See "Recognition of Profits in Real Estate Transactions," *Ontario Securities Commission Bulletin* (Toronto: Ontario Securities Commission, July 1969).

Though the federal and provincial legislation of the mid 1960s were not initiated by widespread dissatisfaction with corporate reporting, they were preceded by a relatively quiet but fairly steady stream of concern.[56] That concern grew to very broad proportions following the mid 1960s and served to thrust the Canadian Institute into a position of great prominence. The American influence which was acknowledged in the Kimber Report's recommendations continued as Canadians closely observed the many aspects of American accounting practice that were being publicly questioned during this period.

A financial failure of significant proportions—the Atlantic Acceptance Company[57]—in 1965 is likely a turning point in the attitude of the public and the financial community with regard to corporate regulation and financial disclosure requirements. From this time onward, governments and boards of enquiry seemed increasingly willing to respond to what were felt to be corporate shortcomings. The Atlantic Acceptance failure brought into question, among other things, the appropriateness of loans to affiliated companies, income reporting practices of financial institutions, and parent auditors' responsibility with regard to the subsidiary auditor's work. This failure, together with a rash of other major financial corporate crises,[58] spurred a concern for reform at many levels.[59] The concern for improved disclosure was accompanied by an increasing demand for narrowing the range of acceptable accounting practices.[60] Principles and standards as well as increased disclosure were now being demanded.

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[56]See the *Report of the Royal Commission on Banking and Finance* (Ottawa: Queen's Printer, 1964), pp. 350, 560-61; and the *Report of the Attorney General's Committee on Securities Legislation in Ontario* (Toronto: Queen's Printer, 1965), p. 7.

[57]Ontario Lieutenant Governor in Council, *Report of the Royal Commission Appointed to Enquire into the Failure of Atlantic Acceptance Company Limited* (Toronto: Queen's Printer, 1969), 4 volumes. Note Mr. Justice Hughes' impatience at the slowness of the accounting profession in resolving issues, pp. 1589-90.

[58]For example, British Mortgage and Trust, Alliance Credit Corporation, Prudential Finance Corporation, Windfall Oils and Mines Limited, Revenue Properties Ltd., Corporation Foncier de Montreal, and the Commonwealth group of companies experienced either failure or major financial crises.

[59]"Finance Company Bill Arousing Business' Ire," *Financial Times* (2 December 1968), p. 3.

[60]See E. C. Harris, "Access to Corporate Information," in *Studies in Canadian Company Law*, ed. J. S. Ziegel (Toronto: Butterworths, 1967), p. 491; also R. H. Jones, "Do Those Financial Statements Really Inform the Shareholder?" *Financial Post*, (18 September 1965), p. 13; and the Director of Research of the Canadian Institute G. Mulcahy, "The Auditor's Report on Consolidated Statements," *Canadian Chartered Accountant* (April 1966): 288.

Modest alterations were legislated in the Ontario Corporations Act[61] of 1970. It was, however, the Canadian Securities Administrators[62] in 1972, the Canadian Business Corporations Act[63] in 1975, and the Ontario Securities Act of 1978[64] that proposed the boldest legislative requirement in response to perceived disclosure and uniformity inadequacies. National Policy No. 27 of the Canadian Securities Commissions indicates that the Canadian Institute Handbook must be used to determine what constitutes generally accepted accounting principles. Greater ease and flexibility in making changes in financial statement requirements are provided in the Canada Business Corporations Act and the Ontario Securities Act by relegating such matters to the Regulations. These Regulations similarly require that financial statements be prepared in accordance with the Handbook. Only with respect to the reporting of diversified operations does the federal legislation go beyond Handbook requirements.[65]

The accounting profession has moved from a pleading or advocacy position to a legislative position. Henceforward, the recommendations of the Institute Handbook are the law of the land. This startling result had little, if any, debate or discussion in the professional literature, though some foreshadowing was evidenced in 1971 in *Proposals for a New Business Corporations Law for Canada* which indicated that

> it should not be left to the persuasive powers of the accounting profession to see to the implementation of improved financial reporting practices, because the unscrupulous will tend to observe only the minimum legal requirements.[66]

(It was only in 1973 that the Ontario Institute's Rules of Professional Conduct required departures from the Handbook to be justified.[67])

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[61]Ontario, Statutes, *The Business Corporations Act*, 1970, 19 Eliz. II, ch. 25. The Lawrence Committee had earlier indicated that "no present need had been demonstrated for amendments of major significance to the financial disclosure provisions of the Ontario Act." The Legislative Assembly of Ontario, *Interim Report of the Select Committee on Company Law—1967* (Toronto: Queen's Printer, 1967), par. 10.1.4.

[62]Canadian Securities Commissions, "National Policy No. 27, Generally Accepted Accounting Principles" (Toronto: CCH, 1972), vol. 2, 54-864.

[63]Canada, Statutes, *Canada Business Corporations Act*, 1975, 23 Eliz. II.

[64]"Publications under the Regulations Act," *Ontario Gazette*, part II (28 July 1979).

[65]*Canada Business Corporations Act Regulations* (Toronto: Richard Dee Boo, 1976), p. 189. It should be noted that a submission by the Institute succeeded in having removed those draft regulations which conflicted with or were redundant with the Handbook. See Canadian Institute of Chartered Accountants, *Draft Regulations Under the Canada Business Corporations Act* (Toronto: CICA, 1975).

[66]*Proposals for a New Business Corporations Law for Canada* (Ottawa: Queen's Printer, 1971), part 13, par. 327.

[67]See G. Mulcahy, "Ontario Institute's New Rules re Accounting Standards," *CA Magazine* (August 1973): 50.

The Public Accountancy Amendment Act of Ontario[68] in 1962 had given members of the Institute of Chartered Accountants of Ontario the exclusive right to the practice of public accounting in Ontario. It may have been only inevitable then that the Ontario Securities Commission, as a member of the Canada Securities Commission, would, when confronted with a mood for reform, look for help from the agency to whom a monopoly had been granted. The earlier-mentioned suggestion that legislation was needed to aid the persuasive powers of the professional accountants may also have been influential in the minds of legislators and securities commissioners.

POSTSCRIPT

The position of the Canadian Institute and its rule-making office would seem to be somewhat different from that of its counterpart institutes in England and America. In the former country, the minimum legal requirements for disclosure continue to be set forth in the Companies Acts.[69] Recommendations of the English Institute are not acknowledged in English legislation, although undoubtedly as in Canada prior to the most recent legislation, Institute recommendations would be regarded as an acceptable standard in the event of enquiry or litigation.

In America, the Securities and Exchange Commission controls accounting practices. Though it acknowledges the pronouncements of the Financial Accounting Standards Board (FASB) as having substantial authoritative support, its on-going close surveillance of accounting matters, through its own releases or in the countermanding of FASB pronouncements, leaves little doubt where short-run as well as long-run command resides.

From the turn of the century in Canada, the legislative authorities have relied heavily on the Institutes to provide the framework for financial statement disclosure. Since the mid-1960s, there has been an increasing public demand to narrow the range of acceptable accounting practices as well as to provide greater disclosure. The extension of these trends has resulted in the formal delegation of the determination of standards and disclosure requirements to the Institute. Institute recommendations are now law, and the various powers within

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[68]Ontario, Statutes, *The Public Accountancy Amendment Act*, 1961-1962, 10 and 11 Eliz. II, ch. 113. This monopoly position is now being questioned in *Professional Regulation*, the study of the Professional Organization's committee appointed by the attorney general of Ontario.

[69]Most recently in Great Britain, Statutes, *Companies Act*, 1976, 24 and 25 Eliz. II, ch. 69 and previously in *Companies Act*, 1967, 15 and 16, Eliz. II, ch. 11.

securities and corporate legislation can be called upon to enforce compliance.

Though the Institute seems to have warmly welcomed its new task,[70] it is not one without extremely heavy responsibilities. When power is given to determine accounting standards, the responsibility to undertake this task in a competent and timely fashion also follows. Though recourse to prior American discussion and research on many of the problems that would confront the Institute would be an invaluable aid, the burden of standard setting is likely to grow at an increasing rate. If insufficient resources are devoted to this task or if improper standards are set, or if standards for particular events or activities have not been set at all, the Institute bears enormous responsibility. To the extent that reliance on the Handbook is complete, the blame for a serious financial scandal that could be attributed to improper or inadequate standards might well redound directly to the discredit of the Institute. In such an event, the Institute might be particularly vulnerable or exposed since, unlike the Financial Accounting Standards Board, the various committees that propose and define standards are composed largely of volunteer members holding relatively short-term appointments.[71] The Institute would be unwise to minimize in any way the significance of the responsibility which it now bears.

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[70]Mulcahy, "New Rules re Accounting Standards," p. 50.

[71]See Canadian Institute of Chartered Accountants, "Rules of Membership and Principal Terms of Reference of Accounting Research Committee as approved by Board of Governors," *CICA Handbook* (September 1973).

A Comparison of Preparation for the Accounting Profession among New Zealand, the United Kingdom, and the United States

WILLIAM MARKELL*

INTRODUCTION

While New Zealand, the United Kingdom, and the United States share a common language, English, there are many differences in their societies. Included in these differences is admission to many of the professions, and to the educational systems. Differences in the preparation for the accounting profession and other related aspects of the profession form the foundation for this paper.

We have only to look at the recent past to find that for many years accountancy was practiced quite differently in various parts of the world. With the increasing interdependence of national economies and financial markets, it has become apparent that greater uniformity in standards of practice is required. The proliferation of multinational corporations, both privately and publicly owned, is one facet of the growing interrelationships among the various national economies. As the number of multinational industrial, commercial, and financial institutions grew, a need for multinational firms of auditors and accountants was felt. Today, there are a number of international chartered accountant (CA) certified public accountant (CPA) firms. The importance of developing common accounting standards has been realized and is evident in the creation of the

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International Accounting Standards Committee. This group has published a number of international standards and is continuing its work. In addition, an international group was recently created to deal particularly with auditing standards. One further indication of the arrival of accounting as an international profession is the decision by one international accounting firm to transfer its headquarters from the United States to Switzerland. This internationalization of accounting obviously has implications for accounting education. How are future accountants being prepared? The purposes of the research project were twofold: (1) to make comparisons between university education for the accounting profession in the United Kingdom, the United States, and New Zealand, and (2) to discover how accounting professionals view accounting graduates from the universities.[1]

METHODOLOGY

The information on university education for the accounting profession in New Zealand and in the United Kingdom was obtained through personal interviews of accounting faculty and administrators at a number of universities as well as through a review of university catalogues (calendars). Views of the professionals were obtained in personal interviews. (The term "professional" is used in the broad sense to include those in public, private, and governmental accounting.)

GENERAL COMPARISONS

Before we look at the differences in university preparation for the professions, some background information is important. "Typical" American and N.Z. youngsters attend school for twelve years prior to entering the university, while in England the pre-university period is normally thirteen years. The additional year does result in some amount of incremental learning as is evidenced by the fact that some U.S. universities will accept English secondary school graduates into the sophomore (second) year of academic programs. Approximately 15 percent of U.K. college-age youth actually go on to higher education with about half of this number attending the universities. The remaining half attend polytechnics and colleges of higher education. In New Zealand, approximately 10 percent of college-age youth

[1]Acquisition of the requisite information and opinions was facilitated by the fact that the writer was able to be at the University of Manchester, Manchester, England, and at the University of Canterbury, Christchurch, New Zealand, for substantial portions of the 1977–1978 academic year.

attend universities, while in the United States, the percentage is about 40 percent. Admission requirements to the better U.K. universities appear in general to be more selective than those of similar U.S. or N.Z. institutions, particularly when compared to those of many U.S. state universities.

An additional item of background information should be discussed. Education at the university level for the accounting profession dates back to the late nineteenth and early twentieth century in the United States, while it has been generally available in the United Kingdom for only about ten to fifteen years, and in New Zealand such education goes back almost thirty years. Accounting education in many universities in the United Kingdom was and is closely associated with departments of economics as was true in the United States in early days. As David Solomons has stated, ". . . accounting studies have suffered from a position of tutelage to departments of economics from which they are only now emerging. . . ."[2] Only recently have separate departments of accounting been established at some of the U.K. universities. New Zealand followed a similar pattern, and at present, accounting departments are generally separate units. It is the writer's opinion that, in some cases in the United Kingdom, the faculty teaching accounting are trying to "prove" that accountancy is as worthy of being included in university curricula as are many more established disciplines. This does much to explain why accounting as taught in many U.K. universities is highly conceptual with scant attention given to more practical or "how to do" aspects. In general, N.Z. and U.S. accounting programs attempt to blend theory with the more mechanical aspects.

EDUCATIONAL SYSTEMS

The comparison presented here is limited to the preparation offered at the undergraduate level by universities. In the three countries, accounting education is offered by institutions other than universities and is also offered at the graduate level, but these are not included in this study.

In the United States, the normal undergraduate program in the more than 500 colleges which offer accounting requires four years of full-time academic study. There appears to be more diversity among the six N.Z. universities. In four of the universities, three years of

[2]*Prospectus for a Profession—The Report of the Long Range Planning Enquiry into Education and Training for the Accountancy Profession* (London: Sullivan, 1974), p. 39.

instruction are needed to meet the requirements of the New Zealand Society of Accountants as well as to complete the formal education. Another university has a four-year degree, and in the sixth, a three-year degree is given, but a student would then attend for a fourth year to meet the professional educational requirements. It is interesting that the newest of the universities was able to initiate a four-year-degree program while others have been prevented from extending the accounting degree for a fourth year.

Accounting education in the United Kingdom normally takes three years, with a four-year degree being possible for honor students in Scotland. Attendance at a university for four years instead of three is not in itself inherently positive (or negative) except for allowing some individuals another year in which to mature. The quality of the fourth year depends on the use to which the time is put. The vast majority of U.S. universities requires students to take at least 40 percent of their work in the "liberal arts" and another 25 percent in the "business core." (See the discussion in the following section.)

CURRICULUM

Comparison of different universities is difficult at best since normally the only information available is the titles of courses and brief descriptions. Curricula in the United States, the United Kingdom, and New Zealand can only be compared in a general way since it is unlikely that any two universities in any country will have exactly the same requirements. The degree requirements for someone majoring in accountancy varies considerably among the six N.Z. universities. In the United States, there are also differences among the over 500 institutions of higher education offering undergraduate accounting programs.

Although these difficulties do exist, accounting education in the countries can be compared in general terms. Schools in the United States generally divide the academic year into two semesters or three quarters, while in New Zealand and the United Kingdom most schools give courses for an entire academic year. One of the N.Z. universities is on a semester system, and another has a mixture.

As the reference point for U.S. educational programs, the undergraduate curriculum at a typical U.S. state university will be used. It is the program with which the writer is most familiar, but of greater importance is the fact that the College of Business and Economics (of which the Accounting Department is a part) is accredited by the American Assembly of Collegiate Schools of Business (AACSB). The AACSB reviews several factors in determining accreditation. These

include, among others, faculty qualifications, student qualifications, student/faculty ratio, library resources, and attitudes of the university administration.

Another very important factor is the curriculum. It is the view of the AACSB (and of virtually all business schools) that there should be a balance between the professional and nonprofessional subject areas. At least 40 percent of the four-year program must be completely outside of the business area. Subjects here would include the humanities, sciences, social science, mathematics, and other electives in the "liberal arts." The professional subject matter includes accounting as well as nonaccounting areas. The nonaccounting business areas must include the business core consisting of behavioral sciences, marketing, finance, production, and business policy. The accounting courses make up the balance of the curriculum. As can be observed from the appendix, it is normal for a significant portion of the nonbusiness courses to be taken in the first two years with the professional courses studied in the later years. While there will be variations among the U.S. universities as to the actual courses offered, the basic format indicated will normally be followed.

A composite sample of several schools will be used for the United Kingdom (see appendix). As can be seen, education is somewhat narrower in the United Kingdom due to the shorter time period involved. A high proportion of the work is in accounting and finance. In all fairness, it should be pointed out that some of the areas specified by the AACSB, particularly finance, are often included as parts of other courses in the United Kingdom. The point is still valid that normally the U.K. student is not exposed to much of the "business core" or liberal arts.

Are these differences between the U.K. and U.S. accounting education important? A recent editorial in *Accountancy Age*[3] argued that too many accountants in the United Kingdom were being educated only to keep score. The editor was quite forceful in indicating that as part of the management team, the accountant must be familiar with all aspects of business. This view is borne out by the opinions of many U.K. practitioners surveyed. They were concerned that accounting education in the United Kingdom is too narrow. The complaint is that graduates have little understanding of the operation of business outside of the accounting function. To be an adviser to management, an accountant should be able to understand the many aspects of a business organizaton. This attitude has caused some difficulty for

[3] "Opinion" (23 September 1977).

accounting students in the job market. (This will be discussed shortly.) This type of complaint is not common among U.S. and N.Z. practitioners.

The setting of specific degree requirements is less clear in the six N.Z. universities. One of the universities does not require anything outside the accounting area. The other schools all specifically require mathematics and economics. In addition to the accounting and law courses, two of the schools require one year of courses normally thought of as being part of business administration. Only one—and this was the university where four years of study are required for the degree—has specific requirements approximating the "business core" as required by the AACSB in the United States. None of the N.Z. universities makes any meaningful effort to ensure that liberal arts and humanities be a part of an individual's collegiate education. While all students have electives and are encouraged to use these for subjects outside of the accounting area, it was generally conceded by the majority of academicians included in the study that very few students availed themselves of the opportunity but instead used their electives to take other courses directly related to their major.

The fact that the U.S. academic year is divided into quarters or semesters results in continuous assessment. This concept has recently been introduced into N.Z. universities while in the United Kingdom, continuous assessment is the exception rather than the rule. In other words, in the United Kingdom, the grade for a course on which a student has worked for an entire year is determined only by an examination at the end.

THE PROFESSION AND ITS VIEWS

As in the United States, the N.Z. accounting profession is generally satisfied with the university accounting graduate, although some N.Z. practitioners did comment that many new graduates did not know enough of the basics of bookkeeping.

Things are much different in the United Kingdom where the vast majority of practitioners interviewed expressed deep dissatisfaction with the university accounting education. As was pointed out earlier, accounting education as part of a university offering has been available to substantial numbers of students in the United Kingdom for only ten to fifteen years. As a result, the vast majority of practitioners who participated in the study had no university degrees at all or had degrees in a variety of disciplines unrelated to accountancy. These people acquired their accounting (really bookkeeping) knowledge by correspondence, private "tutors" (cram courses for the professional

exam), and on-the-job apprenticeships. As several commented, "How did we ever learn anything about accounting theory?"

In spite of the lack of a formal accounting education—or perhaps because of it—it was the general consensus that in today's environment, a university education was essential for the entering professional. (It should be noted that, until recently, it was normal practice for those deciding on an accounting career to start after "A" levels—secondary school—and become an apprenticed clerk.) In the past, individuals of higher academic potential simply did not go to the university if they wanted a career in accounting. The partners and accounting executives interviewed generally made a very clear distinction between universities on one hand and the polytechnics and other institutions of higher education on the other. They made the assumption that now the more able students are those who attend the universities; those in the other institutions are those not good enough for the universities. It was readily conceded that this generalization is not absolutely true, but true enough so that practitioners do not take the time to visit those other institutions for recruiting purposes. Those views were mainly from officials of large firms and may not be representative of views of individuals from smaller firms.

Although the practitioners were quite definite in stating that they were looking for university graduates, they were equally as definite in stating that the type of degree is unimportant; it is the person himself who matters. Many even indicated that they preferred "nonrelevant" (nonaccounting) graduates, particularly from Oxford or Cambridge. Frankly, this was shocking. In the United States, the norm is to recruit the accountancy graduate (with a bachelor's or master's degree) with the nonrelevant person being the exception.

Why does this feeling exist in the United Kingdom? A number of reasons were given:

1. Graduates from other disciplines were simply better. No one had any proof of this. It is probably a carry-over from the supposed superiority of degrees in the arts and classics from prestigious institutions.
2. It seemed to be almost the universal consensus of the professionals that university accounting education is too conceptual. Many graduates are not prepared to "do" anything. It is the custom in the United Kingdom for those under training contracts (apprenticeship) to study basics of accounting from private tutoring firms. The larger employers pay for these courses in addition to allowing the employees time off with pay to attend these sessions.

3. Those in the position to make hiring decisions do not have accountancy degrees.

Only time, patience and aggressive action by accounting faculties will change these attitudes.

The professionals in each country echoed a common complaint about their new recruits' lack of communication skills. At the author's school, an attempt is made to remedy this situation by requiring all accounting majors to elect at least one course in communications in addition to the required course in English composition. This is followed by assignments in accounting courses requiring students to demonstrate their communication skills. It is hoped that there will be a cumulative effect.

There must be a much closer liaison between accounting faculties and members of the profession in the United Kingdom. There appears to be a lack of effort on both sides to establish a meaningful relationship. A selling job must be done on the profession (assuming, of course, that there is a product to sell—and it is believed there is).

As was indicated earlier, one of the complaints of practitioners in the United Kingdom has been that university accounting education is too conceptual and that graduates are not equipped to work effectively except after additional training. While almost everyone had such complaints, as far as could be determined, nothing has been done in an organized fashion by any of the professional groups to communicate these feelings to the universities. The members of the profession must be more aggressive if they are to have an impact on education.

The practitioners interviewed in New Zealand all stated that there are excellent relationships with the universities. When this subject was pursued further, it was found that what this really meant was that they knew the head of the acounting group at each school because of his involvement in the professional society activities. It was conceded on both sides that not enough effort has been expended to develop meaningful relationships. At least at some of the universities, the greater fault lies with the faculty. Even those faculty who are society members rarely attend meetings or involve themselves in society business.

The writer's experience in the United States indicates that it is established policy on both sides to encourage interaction and the development of friendly relations. The establishment of faculty fellowships in public or industrial accounting is one illustration of the implementation of this policy. Faculty members in the United

States are encouraged to join and participate actively in the various professional groups.

OTHER MATTERS

Professional Examinations

The author has not conducted sufficient research to determine if in fact New Zealand is the only country where professional examinations are not required for university graduates who have passed designated courses and who wish to become CAs. In other countries, a comprehensive examination prepared by the appropriate professional group must be successfully passed before an individual can become a CA or CPA. Such an examination is not required in New Zealand for university graduates who have taken the proper courses. With the appropriate education and three years of experience with a firm of chartered accountants, the awarding of a CA certificate is virtually automatic.

Under this system, the New Zealand Society of Accountants appoints an assessor or liaison for each of the universities. This individual reviews course content and examinations as well as the grading procedure, and reports the findings to the society. This is an attempt to ensure that the universities are teaching what the society thinks should be taught and are testing for learning adequately. The practitioners, in particular, seemed to like this approach, indicating that with only six universities, adequate assessment of the universities' programs is possible.

It was interesting to find, however, that while most practitioners interviewed claimed to be satisfied, many admitted that they did not like hiring graduates from two of the universities because of inadequate preparation. The same two schools were named consistently. This would seem to indicate that placing the burden on the universities to ensure preparation for the profession was not really working as well as hoped.

Accounting department heads were neutral on the subject of professional comprehensive exams. Several did comment that if such exams were instituted, it would give them greater flexibility in the type of accounting courses taught.

Women in the Profession

With the experience of Equal Opportunity and Affirmative Action as a background, it was surprising and even disturbing to discover that many N.Z. professionals in the position to make policy decisions are

very set against women in auditing positions. (It is through auditing that people usually advance to partnership status.) The usual reasons given were that women will move with husbands, become pregnant and raise a family, are not as reliable as men, and cannot make decisions. This attitude is certainly not true for all offices or for all firms. However, those who openly seek women because they are as good as men appear still to be in the minority.

There appears to be less obvious discrimination in the United Kingdom, but it does exist. There appears to be an undercurrent of bias against hiring women for reasons similar to those listed by N.Z. practitioners. A potentially valuable resource is not being used to its fullest in the United Kingdom and New Zealand at the present time. There is no doubt that in the past five years, women have had fully equal opportunities with men in the accounting profession in the United States.

Salaries

In New Zealand as in the United Kingdom, starting salaries in industry and government are significantly higher than in public accounting (about 15 to 20 percent higher). The comment was frequently made that compensation in public accounting often surpassed that in industry and government after two or three years. In New Zealand, guidelines for starting salaries are generally agreed upon by the major firms in the different localities. While salaries in the United States and United Kingdom are competitive, there are differences among the various firms. There are also differences among the N.Z. firms. However, the impression obtained was that starting salaries were closer together in New Zealand due to the guidelines agreed upon by committees of public practice of the local branch of the New Zealand Society of Accountants in each major employment area. In general in the United States, the public accounting profession is fully competitive with industry, and is often ahead of government units in terms of salary.

RECOGNITION AS A PROFESSIONAL—USE OF THE ALPHABET

There are six different professional accounting organizations in the United Kingdom, each with its own series of examinations which candidates must pass as one of the requirements for membership. These are the following:

1. Institute of Chartered Accountants in England and Wales (ICAEW);

2. Association of Certified Accountants (ACA);
3. Institute of Chartered Accountants of Scotland (ICAS);
4. Institute of Cost and Management Accountants (ICMA);
5. The Chartered Institute of Public Finance and Accountancy (CIPFA); and
6. Institute of Chartered Accountants in Ireland (ICAI).

Each of these is at least national in scope with the opportunities for membership often available on an international basis within the British Commonwealth.

Only one of the six accounting organizations requires higher education as a prerequisite to membership—ICAS. As late as 1975, barely more than half of the new entrants to the ICAEW were university graduates.[4] In general, these bodies allow a waiver of portions of the examinations for appropriate courses from specified institutions of higher learning. However, a final comprehensive examination is required of all candidates for each of the institutes. In all cases, the organizations sponsor courses to prepare individuals to sit for the various levels of examinations. Here, again, the Scottish Institute is unique. It employs full-time staff to instruct its courses. The other organizations depend on public or private institutions to do the required teaching. The accountancy bodies all require practical experience in addition to an examination. A training contract is signed by both employer and employee. The term of the contract can vary from three to five years, depending on the level and type of formal education completed. While an employee can change positions, approval of the change must be obtained from the appropriate institute, and the new employer must be willing to sign a training contract for the remaining period of required experience. It appears that the employer who has signed a training contract is somewhat constrained if an individual proves to be unsatisfactory.

In the United States, membership possibilities are somewhat more confused. There are several national organizations:

1. American Institute of Certified Public Accountants (AICPA);
2. National Association of Accountants (NAA); and
3. Institute of Internal Auditors (IIA).

While the three U.S. organizations are all national in scope, membership in the AICPA is possible *only* if an individual has been

[4]Bryan Carsberg, "The Education of the Accountant," in *Education for the Profession*, by J. D. Turner and J. Rushton (Manchester, England: Manchester University Press, 1976), p. 15.

awarded a CPA certificate by one of the fifty-four jurisdictions authorized to issue such certificates (the fifty states plus several other localities). In other words, there are fifty-four different sets of regulations governing education and experience. In all cases, a written examination is required. It is uniformly prepared and graded by the AICPA with the results forwarded to each jurisdiction. Most states require a university degree in accountancy as well as experience (one to two years) in addition to the examination. Membership in the NAA and the IIA is open to anyone who has the interest. Only recently have these two organizations developed examinations to test knowledge in the fields of managerial accounting and internal auditing, respectively. Upon successfully passing the examination, a person will receive a certificate in management accounting (CMA) or certificate in internal auditing (CIA) which indicates the level of knowledge demonstrated. At the present time, membership in the organizations is not related to the successful passing of the examination.

In New Zealand, there is a single professional organization—The New Zealand Society of Accountants. This organization is a combination of two previous associations, one of public accountants and the other cost accountants. As indicated earlier, a university graduate with the proper courses can become a CA after three years with a firm of chartered accountants. For someone interested in industry, other courses are required to join the cost group. Those who do not have a university degree must sit for a series of examinations and gain practical experience in order to become members.

SUMMARY AND A LOOK AT THE FUTURE—UNITED KINGDOM

It was not unexpected that there would be a difference in education for the accounting profession between the United States and the United Kingdom. While the profession really started in the United Kingdom (many of the large U.S. firms owe their start to immigrants from Scotland and England), preparation for it via the formal education route was a factor in U.S. life long before it started in the United Kingdom. The very fact that the U.S. society as a whole has expanded and changed rapidly may be a factor in the rapid growth of the accounting profession. Continuing changes in the United States are evidenced by the recent interest in accreditation of academic programs in accounting.[5] The major movement in the United States

[5]American Institute of Certified Public Accountants, *Final Report, Board on Standards for Programs and Schools of Professional Accounting* (New York: AICPA, 1977); American Accounting Association, Committee on Accounting Education, *Standards for Professional Accounting Education* (Menasha, Wis.: AAA, 1977).

appears to be towards requiring a minimum of five years of education to prepare the professional accountant. It is the opinion of many educators and practitioners that four years is simply not enough time to prepare the educated professional. Pressure for increased education beyond the present three-year program did not seem to exist in the United Kingdom, although there is a very strong movement toward requiring university graduation. In the writer's opinion, it is incumbent on both the universities and the profession in the United Kingdom to work together to develop a viable accounting education from which the graduate will be eagerly accepted. In addition, it is essential that the programs of the future be designed for a longer period of time than is presently true. After all, the study of law is now longer than that required for accounting. Is the accounting profession any less of a profession than law? Based on general observations, it appears that university accounting education is slowly moving toward a better balance between theory and practice.

SUMMARY AND A LOOK AT THE FUTURE—NEW ZEALAND

On the whole, education for the accounting profession in New Zealand is not too different from such education in the United States. It is believed, however, that improvements are needed in two areas, the first related to the length of time for education. A larger body of knowledge could be taught given additional time, and accounting students would be much more broadly educated as well. It is strongly recommended that education authorities in New Zealand recognize the advantage of at least a four-year education. If that is accomplished, guidelines similar to those recommended by the AACSB would be followed. As has been stated, accounting education in the United States is rapidly moving toward a five-year requirement.

The second major change recommended would be for the New Zealand Society of Accountants to institute an examination for all those who wish to enter public practice. Such a step would assure some minimum uniformity of preparation for candidates seeking to enter the profession.

It must be noted that the recommendations made are those of the writer based on his experience and observations. In general, the members of the practicing profession were satisfied with present conditions and did not perceive a need for additional education or a comprehensive examination.

APPENDIX

A U.S. State University

B. S. in Accounting

First Year—separated by semesters

Economics	—1 year
Math/calculus	—1 year
English composition	—1 semester
General electives	—5 semesters

Second Year—separated by semesters

Accounting	—1 year
Statistics	—1 year
Math and/or science	—1 year
Computer science	—1 semester
Economics	—1 semester
General electives	—3 semesters

Third Year—separated by semesters

Intermediate accounting (theory)	—1 year
Managerial/cost accounting	—1 semester
Marketing	—1 semester
Finance	—1 semester
General electives	—1 semester
Production management	—1 semester
Communications elective	—1 semester
Business elective	—1 semester
Economics elective	—1 year

Fourth Year—separated by semesters

Business law	—1 year
Auditing	—1 semester
Advanced accounting	—1 semester
Taxes	—1 semester
Security analysis	—1 semester
Business elective	—1 semester
General elective	—1 year
Business policy	—1 semester

United Kingdom

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The Equity Method of Accounting for Investments in Common Stock: The New Zealand Experience

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Accounting for investments in stock of other corporations has been a controversial area of external financial reporting for many years. Only in relatively recent years has it become generally accepted that investments are to be divided into three categories—subsidiaries, investments which can be significantly influenced, and portfolio investments—and that the methods of accounting for these three categories should be different, after considering the nature of the investment.

Accounting for those investments which can be influenced by the investor corporation has been standardized through the pronouncement of standards by most of the major accounting bodies of the English-speaking world. In New Zealand, the Council of the New Zealand Society of Accountants have accepted the Statement of Standard Accounting Practice No. 2—Accounting for Associated Companies (Equity Accounting),[1] the equivalent to APB No. 18[2] in the United States.

The objectives of this article are first to state the position in New Zealand regarding the equity method of accounting for investments in common stock and to highlight some of the main differences with APB No. 18 and the pronouncements and exposure drafts in certain other English-speaking countries. Second, it will report the financial reporting practice of N.Z.-listed public corporations in the light of the recommendations of SSAP No. 2.

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[1]Hereafter referred to as SSAP No. 2.

[2]Reference will be made to APB 18, although it is recognized that it has been incorporated into the AICPA Professional Standards as AC Section 5131.

The information for this study was obtained from the following main sources:

1. A review of the equity accounting pronouncements and exposure drafts of accountancy bodies in several English-speaking countries[3] and a review of the literature discussing accounting for investments in common stock of other corporations included in these pronouncements and exposure drafts;
2. An examination of the first annual financial reports of 235 listed New Zealand public-issued corporations after SSAP No. 2 became operative. This group represents approximately 95 percent of all listed public corporations in New Zealand;[4] and
3. The results of interviews with executives who represent forty-one corporations from Auckland, Wellington, and Christchurch which had adopted SSAP No. 2. The purpose of the interviews was to obtain an insight into three main areas: (a) interpretation by corporations of certain terms used in SSAP No. 2; (b) accounting problems encountered with the adoption of SSAP No. 2; and (c) views held by corporation executives as to the usefulness of financial reports prepared on an accounting basis.

EXTERNAL FINANCIAL REPORTING IN NEW ZEALAND

To appreciate SSAP No. 2 more fully, it may be useful to consider financial reporting requirements in New Zealand in general and the role played by Statements of Standard Accounting Practice in particular.

External financial reporting in New Zealand is largely influenced by the requirement in the New Zealand Companies Act of 1955 that

> Every balance sheet of a company shall give a true and fair view of the state of affairs of the company as at the end of its financial year, and every profit and loss account of a company shall give a true and fair view of the profit or loss of the company for the financial year.[5]

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[3]The review covered the pronouncements and exposure drafts of New Zealand, the United Kingdom, the United States, Canada, Australia, and the International Standard issued by the International Standards Committee.

[4]To be listed on the New Zealand Stock Exchange a corporation must comply with the listing requirements of the Stock Exchange Association of New Zealand. Among other things, one of the requirements for listing is a certain spread of stock ownership, stated in sections 302/3 of the Listing Manual as:

> In any one class of equity share, the minimum spread shall be—
> (a) at least 200 shareholders each holding not less than a marketable parcel and
> (b) 25% of the number of issued shares of the class with a minimum of $100,000 nominal value, held by members of the public.
> Where the issued equity shares of any one class are of a nominal value of less than $400,000, the minimum number of shareholders (each holding not less than a marketable parcel) may be 100, provided paragraph 302 is otherwise complied with.

[5]New Zealand Companies Act 1955, Section 153 (1).

It is within this overriding "true and fair view" requirement that the council of the New Zealand Society of Accountants issued its Statements of Standard Accounting Practice, thus providing a more definitive interpretation of the "true and fair view" requirement. Standards are issued to describe methods of accounting approved by the council of the Society for application to all external financial statements. "External" in this context is interpreted as statements for other than internal management use.

While they are not legally binding, the standards are to be observed by members of the Society whenever appropriate. It is recognized, however, that no standard, no matter how comprehensive, can provide for all possibilities or circumstances; for this reason, the statements themselves provide for the possibility of departure. Significant departures are to be disclosed and explained, and the financial effects estimated and disclosed unless this is impractical or misleading.

As far as the auditors' position is concerned, all significant departures should be noted in the auditors' report and any significant departure quantified. The auditor is not required to make a positive statement to the effect that all standards as pronounced by the Society have been complied with in the same way that he or she is required to make a positive statement in respect to the compliance with the provisions of the Companies Act. The auditor shall merely refer to any departure which materially affects the financial statements as stated.

The current series of standards began in 1974 and by August 1978, the following seven standards had been pronounced:

SSAP		*Date pronounced*	*Effective date*
1	Disclosure of Accounting Policies	November 1974	January 1, 1975
2	Accounting for Associated Companies (equity accounting)	December 1974	April 1, 1975
3	Depreciation of Fixed Assets	August 1975 (Amended April 1977)	April 1, 1975
4	Valuation and Presentation of Inventories in the Context of the Historical Cost System (incorporating IAS-2)	November 1975	March 31, 1976
5	Events Occuring after Balance Date	December 1976	March 31, 1977
6	Materiality in Financial Statements	August 1977	December 31, 1977
7	Extra-ordinary Items and Prior Period Adjustments	December 1977	March 31, 1978

In addition to these standards, the following exposure drafts were still outstanding by August 1978:

Exposure Draft		*Issue date*
14	Accounting in Terms of Current Costs and Values	August 1976
16	Consolidated Financial Statements	February 1977
17	Information to be Disclosed in Company Balance Sheets and Profit and Loss Accounts	February 1977
18	Statement of Sources and Application of Funds	April 1977
19	Expenditure Carried Forward to Subsequent Accounting Periods	September 1977
20	Accounting for Income Taxes	June 1978

The sudden surge in exposure drafts and pronouncement of standards in New Zealand has not been without criticism. Some in the financial press have publicly labelled the drafts "costly non-productive work," representing a handicap to corporation profitability.

INVESTEES FOR WHICH EQUITY ACCOUNTING IS APPROPRIATE[6]

In New Zealand, the equity method of accounting is used only for investments in what can be defined as "associated companies" as per SSAP No. 2, paragraph 3.1:

A company (not being a subsidiary of the investing company) is an associated company of the investing company if:
a) The investing company's interest in the associated company is effectively that of a partner in a joint venture or consortium;
b) The investing company's interest in the associated company is for the long term, substantial, and material either as to the amount invested or as to

[6] The overall results of the survey of the first annual report of 235 public corporations listed in New Zealand after SSAP No. 2 became operative are as follows:

	No. of companies	%
No stock in other corporations	47	20
Made no reference to associated companies (or SSAP No. 2) but had stocks in other corporations (SSAP No. 2 not adopted)	75	32
Stated that SSAP No. 2 was not adopted	40	17
Adopted SSAP No. 2	73	31
	235	100

> profits and losses, and having regard to the disposition of the other shareholdings, the investing company is in a position to exercise significant influence over the associated company.
>
> In both cases it is essential that the investing company participates (usually through representation on the board) in commercial and financial policy decisions of the associated company, including the distribution of profits.

The use of the equity method, as outlined in SSAP No. 2, is currently not extended to accounting for unconsolidated subsidiaries. A subsidiary company is explicitly *excluded* from the definition of an associated company, while SSAP No. 2 is restricted to companies which can be defined as associated companies in accordance with SSAP No. 2. There is currently no other standard which would make the equity method acceptable for unconsolidated subsidiaries.[7] In contrast, the American Institute of Certified Public Accountants (AICPA) has gone a step further in APB 18 by permitting the extension of the application of the equity method to accounting for unconsolidated subsidiaries, both domestic and foreign, in the consolidated financial statements.[8]

The definition of an associated company in SSAP No. 2 is made in terms of investments in "companies." Unfortunately, it is not clear whether the term "companies" means only legally incorporated corporations or whether it is used in a more general way to include partnerships and unincorporated joint ventures as well. However, the tenor of the whole statement seems to exclude unincorporated businesses from the definition of an associated company.

This limitation of the definition of associated companies seems to be consistent with the opinion of the Accounting Principles Board, as expressed in APB 18. However, the Accounting Principles Board also notes that "many of the provisions of the Opinion would be appropriate in accounting for investments in these unincorporated entities."[9] In contrast, the Canadian Institute of Chartered Accountants (CICA) does not limit the application of the equity method to legally incorporated investees but states that, for the purpose of handbook section 3055, "a joint venture may be incorporated or unincorporated."[10] Unlike the CICA which deals with joint ventures and other

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[7]However, it is proposed in Exposure Draft No. 16 that the equity method be extended to unconsolidated subsidiaries.

[8]American Institute of Certified Public Accountants, *APB 18*, Paragraph 14 (New York: AICPA, 1971).

[9]American Institute of Certified Public Accountants, *Accounting Interpretations of APB Opinion No. 18*, Interpretation No. 2 (New York: AICPA, 1971).

[10]Canadian Institute of Chartered Accountants, *Handbook*, Section 3055.05 (Toronto: CICA, 1977).

certain long-term investments in two separate handbook sections, in New Zealand both types of investees are covered in one standard, that is, SSAP No. 2.

For the purpose of SSAP No. 2, a joint venture or consortium is defined as

> a company owned or operated by a small group of investors as a separate and specific business or project for the mutual benefit of the group (which may include the government) each of whom participates directly or indirectly in the overall management of the company.
>
> (Note: While the ownership of the major shareholdings in a joint venture or consortium would seldom change and normally its shares would not be traded publicly, a minority public ownership would not preclude a company from being a joint venture or consortium.)[11]

Unlike the recommendations of the CICA, proportionate consolidation is not mentioned as an alternative reporting method for joint ventures in certain circumstances in SSAP No. 2.

An investee corporation, other than a joint venture or consortium, is defined as an associated company if the investor corporation's interest in the investee is: (1) long term; and (2) substantial;[12] and (3) material, either as to the amount invested or as to profits losses; and (4) the investor corporation is in a position to exercise significant influence, having regard to the disposition of the other stockholders.

Similar to the other pronouncements and exposure drafts examined, the main justification for the equity method seems to be the criterion of "significant influence." Opponents of the equity methods have argued that the term *significant influence* is too vague to expect uniform application and that the guideline of 20 percent is purely arbitrary.[13] Interviews with executives of forty-one corporations revealed that the major criteria used in defining an associated company were percentage ownership and representation on the board of directors. The other criteria were largely ignored. In other words, the majority of executives stated that the decision to adopt the equity method was based mainly on the arbitrary rule of ownership and board representation. Furthermore, the various terms used in SSAP No. 2 to define an associated company were interpreted in various ways by individual companies, and there was limited evidence of a clear consensus of opinion.

[11]SSAP No. 2, Paragraph 3.1.

[12]Twenty percent of equity voting rights is stated as a prima facie guideline for the interpretation of the term "substantial."

[13]For example, E. S. Hendriksen, *Accounting Theory*, 3rd ed. (Homewood, Ill.: Richard D. Irwin, Incorporated, 1977).

ACCOUNTING PRACTICE VERSUS CONSOLIDATION PRACTICE ONLY

The equity method can be considered from two different points of view. On the one hand, it can be regarded as an alternative to the cost method, or the market value method, in accounting for certain investments in the books of the investor itself. Alternatively, the equity method can be regarded as an alternative way of incorporating certain investments, such as associated companies, in the consolidated financial statements only.

SSAP No. 2 restricts the principles of equity accounting to consolidated financial statements; that is, the equity method is considered only appropriate in the context of preparing financial reports for a group of corporations considered as one economic entity. In the books of the investor as a legal entity, associated companies are not to be shown on an equity accounting basis. Unfortunately, no indication is given in SSAP No. 2 or in any other standard in New Zealand as to the value at which associated companies should be carried in the accounts of the investor itself.

Contrary to the recommendations in SSAP No. 2, there is the view that equity accounting is

> . . . simply . . . a method of accounting, on an accrual basis, for income from certain classes of investments, thereby ensuring improved reporting on the worth of the particular investments to the investor. This view being taken, it is desirable that the equity method be employed in the first instance in the accounting records and financial statements of the investor itself as the primary accounting unit and, merely as a consequence thereof, also in the consolidated financial statements. Moreover, having regard to the essentially similar characteristics of investments in associated companies, it is logical that application of the equity method in the accounting records and financial statements of the investor itself should extend to subsidiaries as well as to associated companies.[14]

A similar view is expressed in APB 18, paragraph 17: "When the equity method is appropriate, it should be applied in consolidated financial statements *and* in parent-company financial statements prepared for issuance to stockholders as the financial statements of the primary reporting entity" (emphasis added). From both of these statements it is clear that the equity method is considered appropriate not merely in the preparation of consolidated financial statements but also for the accounting in the books of the investor itself.

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[14]Australian Society of Accountants and the Institute of Chartered Accountants in Australia, Second Australian Exposure Draft, paragraph 19 (Melbourne: ASA and ICAA, September 1973).

One of the major arguments advanced against the application of the equity method is that the retained earnings of the associated companies have not been realized as far as the investor is concerned.[15] The requirement in SSAP No. 2 to include an associated company's retained earnings as part of the consolidated income of the economic entity, although disclosed as a separate item, is similar to the inclusion of the retained earnings of a subsidiary. The distinction is merely that the investor "controls" the distribution of the subsidiary's retained earnings whereas the distribution of the associated company's retained earnings is only "significantly influenced." In both cases, retained earnings are only recognized in the calculation of income of the economic entity.

The implication of this distinction is that, due to the inclusion of the investor's share of an associated company's retained earnings in consolidated income of the economic entity, the economic entity is indirectly redefined. The new economic entity is based on "control" *and* "significant influence" whereas previously it was based merely on "control." In the context of SSAP No. 2, the requirement for adherence to the "realization" concept is therefore met.

If, on the other hand, it is recommended, as in the case of the Second Australian Exposure Draft (1973) and APB 18, that the equity method be used for the purpose of actual book entries by the investor as a legal entity, the problem of the "realization" concept must be resolved. The question is whether the "realization" concept is interpreted in terms of actual dividends received/receivable or in terms of absolute "control" over dividend policy, or whether an interpretation in terms of "significant influence" over dividend policy is preferable in the light of the "true and fair view" requirement for external financial reporting, the expression used in New Zealand.

PROPOSED METHOD FOR RECOGNIZING INCOME FROM ASSOCIATED COMPANIES

Under the equity method, the investor recognizes income from an associated company at the time it is reported as income by the associated company itself, rather than at the time dividends are received/receivable from the associated company. Although this basic recommendation is universal in the various pronouncements and exposure drafts examined, there are differences in the accounting

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[15] American Institute of Certified Public Accountants, *Comment Letter No. 11 on Exposure Draft on Proposed Opinion No. 18: The Equity Method of Accounting for Investments in Common Stock* (New York: AICPA, 1971).

adjustments recommended, in particular in regard to the elimination of unrealized profits on intercompany transfers.

The following statement in SSAP No. 2 summarizes the required accounting adjustments for the purpose of recording income from associated companies:

> Wherever the effect is material, adjustments similar to those adopted for the purpose of presenting consolidated accounts should be made to exclude from the investing company's consolidated accounts such items as unrealised profits on stocks transferred to or from associated companies. . . .[16]

Unfortunately, there is presently no guideline available in New Zealand in the form of a Statement of Standard Accounting Practice for the preparation of consolidated financial statements, and in particular for the proportion of the elimination of unrealized profit.[17]

An examination of other pronouncements and exposure drafts reveals a disagreement in the recommended proportion of unrealized profits to be eliminated. The CICA makes the following recommendation in respect to unrealized profits losses on intercompany transactions of the consolidated group:

> Complete elimination of unrealized intercompany gains or losses and adjustments of applicable income taxes is necessary so that assets may be presented at historic cost to the consolidated entity. There is a view that, where a minority interest exists, a proportion of any intercompany transaction may be considered to have been at arm's length, and that the proportion of the gains or losses relating to the minority interest would be recognized in computing income. This view is inconsistent with the fact that the parent and its subsidiary are related and therefore not operating at arm's length. For this reason, unrealized intercompany gains or losses should be entirely eliminated. (For treatment of gains or losses on transactions between a venturer and a joint venture, see . . .)[18]

Although this recommendation relates purely to subsidiaries, the same recommendation is made indirectly in the case of associated companies (excluding joint ventures) when it is stated in Handbook Section 1600.73 that, "Accounting for an investment under the equity method results in the net income of the investor being the same as the consolidated net income would have been if the financial statements of the investee had been consolidated with those of the investor."

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[16]SSAP No. 2, Paragraph 4.5.

[17]It is, however, stated in Exposure Draft No. 16, paragraph 5.4.(c) that "The portion of unrealised profits arising in the current period should be charged against consolidated income with appropriate adjustment to minority interest."

[18]Canadian Institute of Chartered Accountants, Handbook Section 1600.28, (Toronto: CICA, 1977).

On the other hand, unrealized profits on intercompany transfers between a joint venturer and joint venture are subject to the following recommendation:

> As the fellow venturers participate in the control of the joint venture, the venturer involved in the transaction could be considered to be dealing at arm's length with several independent parties. On this basis, a gain can be considered to have been realized to the extent of the interests of the other joint venturers and that proportion should be recognized.[19]

In the case of a loss arising from the transaction between the venturer and the joint venture, it is recommended that the entire loss be recognized. It is reasoned that "Failure to recognize the entire loss ignores the existence of evidence which supports the fact that there has been an impairment in the value of the asset transferred."[20]

The Accounting Principles Board of the AICPA maintains that the question of "whether all or a proportionate part of the intercompany profit or loss should be eliminated under the equity method depends largely upon the relationship between the investor and investee."[21]

It is argued that

> When an investor controls an investee through majority voting interest and enters into a transaction with an investee which is not on an "arm's length" basis, none of the intercompany profit or loss from the transaction should be recognized in income by the investor. . . .
>
> In other cases, it would be appropriate for the investor to eliminate intercompany profit in relation to the investor's common stock interest in the investee.[22]

In the second Australian exposure draft, the argument for the elimination of unrealized profits on intercompany transactions on the basis of percentage ownership is stated as follows:

> In applying the equity method, unrealised profits or losses of either the investor or the investees concerned, arising from transactions between the investor and those investees, or between those investees themselves, should be eliminated in the same manner as if the financial statements of the investees were being consolidated with those of the investor. In so far as such profits or losses have been recognized in the accounts of the investees, the elimination should be limited to the investor's proportionate share.[23]

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[19]Ibid., Handbook Section 3055.18.

[20]Ibid., Subsection 21.

[21]American Institute of Certified Public Accountants, *Accounting Interpretations of Opinion No. 18: Intercompany Profit Eliminations under Equity Method* (New York: AICPA, 1971).

[22]Ibid.

[23]Paragraph 30.

In the light of such diverse professional opinion and the lack of guidance in SSAP No. 2, it is not surprising to find a variety of accounting practices followed by listed public corporations in New Zealand. Exhibit 1 represents a summary of the responses by corporation executives concerning the accounting practices followed in eliminating unrealized profits on intercompany inventory transfers.

The conclusion which can be drawn from exhibit 1 is that, although unrealized profits on intercompany transfers are not material in a large proportion of those corporation executives interviewed, there was considerable variation in practice where the amounts involved were considered material.

Exhibit 1. Unrealized Profit Elimination Practice

	Percentage of all corporations interviewed
No elimination—not material	30.0
No elimination—inventory at year end is consistent from year to year	5.0
No elimination—no reason given	2.5
No elimination—only arm's length transactions	5.0
No elimination—transfer on cost basis	2.5
No elimination—not really considered	5.0
No transactions with associated companies	17.5
No inventory from intercompany transfer held at end of year	2.5
Eliminated—on percentage ownership basis	7.5
Eliminated—100 percent	12.5
No current elimination but will do so on percentage ownership basis	5.0
No current elimination—but will do so 100 percent	2.5
Eliminated—inventory 100 percent, fixed assets on percentage ownership basis	2.5
	100.0

REASONS FOR NOT APPLYING EQUITY ACCOUNTING

There are two main reasons outlined in SSAP No. 2, paragraph 4.4, for the nonadoption of equity accounting:

An associated company's results should be omitted from the consolidated accounts only on the same grounds as those which would permit group accounts not to deal with a subsidiary, notably if the inclusion of such results:

(a) Would involve expense or delay out of proportion to the members of the investing company; or
(b) Would be misleading
The reason for omission should be stated.[24]

This means that the decision whether or not "an associated company's results should be omitted from the consolidated accounts" should be made on the basis of a cost/benefit analysis, that is, the benefits[25] (in terms of valuable information) from the adoption of SSAP No. 2 should outweigh the costs (in terms of expenses, or delaying information) of applying it.

The second reason for not applying equity accounting, that is, "if the results would be misleading," is probably the more important. Information is to be omitted if it would lead to wrong economic decisions. Unfortunately, no guidelines are provided for situations in which the inclusion of an associated company on an equity accounting basis would be misleading. Paragraph 4.4 specifies that not only should the fact be stated that any associated company's results are omitted, but that also the reason for such an omission should be included.

One further point must be stressed. The requirement that the reason for omitting the results of associated companies be stated refers only to investees (defined as associated companies according to SSAP No. 2). For example, a statement such as "We have no significant influence over the associated company" is a contradiction. This statement is merely saying that the investee company is not an associated company and therefore SSAP No. 2 is not applicable by definition.

The result of the survey of the forty companies which stated that SSAP No. 2 had not been adopted is summarized in exhibit 2.

By far the most common reason given was that the inclusion of the associated companies' results would not materially affect the overall results as published. Unfortunately, most companies did not indicate in their annual report what they perceived to be "material." In six cases, various reasons were advanced for not adopting SSAP No. 2, such as no worthwhile information would result; adoption could

[24]SSAP No. 2, Paragraph 4.4. This paragraph is similar to subsections 154(2)(b)(i)(ii) of the New Zealand Companies Act 1955 which exempt a holding company from preparing consolidated statements under similar circumstances.

[25]The concept of "measuring the benefits" derived from including the results of associated companies is operational if it is interpreted in the context of "materiality." Materiality is defined in general terms in SSAP No. 6: "Materiality in Financial Statements," issued by the Council of the New Zealand Society of Accountants, August 1977.

Exhibit 2. Reasons for not Applying Equity Accounting

		Auditor		
	No. of companies	*Repeats same statement*	*Disagrees*	*No comment*
Not material	25	1	–	24
No significant influence over associated company	3	–	1	2
Various reasons	6	2	–	4
No reason given	6	4	–	5
	40	4	1	35

lead to misleading information; audited accounts of associated companies were not available; associated companies' retained earnings are not available for distribution; and special circumstances relating to associated company.

SUMMARY

The objectives of this paper were to outline the equity method of accounting for investments in common stock as applicable in New Zealand and to highlight some of the main differences from the pronouncements and exposure drafts of other English-speaking countries. The author concludes that SSAP No. 2 differs from the other pronouncements and exposure drafts examined in some important areas: for example, in New Zealand, the equity method is currently considered appropriate only for the preparation of consolidated statements but not for accounting entries in the books of the investor as a legal entity. The international comparison of pronouncements and exposure drafts revealed disagreements in certain areas, such as the proportion of unrealized profits to be eliminated on intercompany transfers.

Interviews with executives of forty-one corporations in New Zealand listed on the Stock Exchange revealed that the requirements of SSAP No. 2 were not always uniformly interpreted in practice. However, only in a few cases was there a fundamental departure from the requirements of SSAP No. 2 where associated companies were either fully consolidated (similar to subsidiaries) or accounted for on an equity basis in the books of the investor.

Corporations in New Zealand are rather small on an international scale: there are no corporations comparable to the international

giants, and intercorporate investments which fall into the category of associated companies are not generally significant. Only 48 percent of the 235 corporations surveyed did state that they had associated companies, but only 31 percent did apply equity accounting. Of these 31 percent, a large proportion had only one or two associated companies which could in many cases have been ignored as not being material.

Accounting Information and the Development Planning Process in Kuwait

SHUAIB A. SHUAIB*

Accounting has two functions for macroeconomic purposes: as a device to gather data, and (2) as a tool to implement national economic policies. Accordingly, sound accounting practice can contribute substantially to the achievement of the objectives of the national economic plans of developing nations.[1]

This study investigates the information requirements of the development planning process in Kuwait and identifies areas where improvements in accounting practices are needed to facilitate the attainment of national economic goals. Although the study is primarily concerned with the state of Kuwait, the author hopes that other developing nations with similar economic conditions, such as the Gulf states, can use the findings to reassess the role accounting plays in the formulation and implementation of their national development plans. The development planning process covered here describes the situation in Kuwait. The development planning process can be broadly defined as the determination of an optimum develop-

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[1]See Gerhard G. Mueller, *International Accounting* (New York: Macmillan Company, 1967), pp. 3-30; Belverd E. Needles, Jr., "Implementing a Framework for the International Transfer of Accounting Technology," *International Journal of Accounting* (Fall 1976):45-62; Wesley T. Andrews and Charles H. Smith, "A Role for Financial Accounting in National Economic Planning in the United States," *International Journal of Accounting* (Fall 1976): 133-45; and Merrill E. Cassell, "Economic Development Accountancy," *Management Accounting—Journal of the Institute of Cost and Management Accountants* (May 1979): 23-24.

ment path for a country's economy. The implications of the process will be different from one country to another since the ways in which the plan is prepared and executed vary between countries. In some countries, economic development plans are mandatory, while in others they are only consultative. There is no single formula which can be applied to all countries since the economy of each country has its own peculiar structural characteristics. Kuwait's development planning is mandatory for the public sector but only serves as a guide for the private sector.

Planners in Kuwait are faced with two economic policy problems. One is finding the best investment opportunities for the country's substantial savings. The other problem is how best to expand the opportunities for investment within the country, given the limited availability for skilled labor and locally produced materials.

During the course of this study, much information and perspective was obtained through an informal process of contacts and interviews with public officials and professional accountants in Kuwait. Library research provided background information on accounting and the economic development planning process. The stage of development and usefulness of the accounting structure in developed countries was used as a guide, whenever appropriate, to identify the information requirements of Kuwait's development planning process and as a frame of reference to evaluate the contribution accounting could make to the development planning process in Kuwait. Other information pertinent to the study was gathered from publications of the Ministry of Planning, the Central Bank, the Ministry of Finance, and the Ministry of Commerce and Industry.

DEVELOPMENT PLANNING PROCESS IN KUWAIT

Economic development planners in Kuwait have a difficult task in formulating a national plan since they are concerned not only with maximizing national income in a given period, but also with many other factors which help to achieve a balanced growth. Kuwait has not fettered itself by the constraints of over-specific development plans: a substantial part of the national revenues has always been channeled to the creation of social and capital infrastructure and the development of industry, although this has been accomplished primarily through allocations in the annual budgets. The first Five-Year Plan was for the period 1967-68 to 1971-72, and in 1976, the Planning Board (now Ministry of Planning) completed the second Five-Year

Plan for the period 1976-77 to 1980-81.[2] For example, the first Five-Year Plan in Kuwait had the following objectives:

1. The achievement of a compound rate of growth in the national income of 6.5 percent per annum;
2. The diversification of economic activity;
3. The development of Kuwait's human resources through extended education and by raising the level of labor skills through intensified vocational and technical training;
4. Expansion of the basic infrastructure economic projects;
5. Attainment of a more equitable distribution of income; and
6. The establishment of closer and better coordinated economic links with other Arab countries.[3]

Almost any development planning process can be divided into three stages: the macro (aggregate) stage, the sectorial stage, and the project stage.[4] At the macro stage, the planners determine a target rate of growth for the whole economy. Next, planners compute the capital-output and the labor-output ratios. These two ratios are also called the marginal or incremental capital-output ratio and the marginal or incremental labor-output ratio. These ratios indicate the amount of capital formation necessary to produce a unit increase in gross domestic product. In general, this means the ability of one additional increment of the factor in question to increase the total output.

Given the incremental capital-output ratio and the target rate of growth, the investment requirement for the period can be determined. The determination of a realistic investment target depends on the reliability of the methods used to determine gross national produce and gross capital formation. The question now arises as to the reliability of these figures and how sound accounting techniques can contribute to making them more reliable.

Estimates of Gross National Product in Kuwait

The first attempt to estimate the gross national product (GNP) of Kuwait was made in 1961 by the International Bank for Reconstruc-

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[2]The Economist Intelligence Unit Ltd., *Quarterly Economic Review of Kuwait* (Annual Supplement 1978): 27-28.

[3]The Planning Board, *The First Five Year Development Plan* 1967-68 to 1971-72 (Kuwait: Government Printing Press, 1968) (hereafter cited as the Plan 1967-68 to 1971-72).

[4]Brian Van Arkadie and Charles R. Frank, Jr., *Economic Accounting and Development Planning* (New York: Oxford University Press, 1969), p. 332.

tion and Development (IBRD) mission. The IBRD estimated the 1959 GNP at approximately 296 million Kuwaiti Dinars (KD).[5] A similar estimate for 1962 to 63 was KD 370 million, indicating a growth rate of about 8 percent a year.[6] The estimates were considered approximations because only limited statistical data were available for use and no distinction was made between estimates in market prices and in factor costs.[7]

In 1962, the Planning Board began to estimate the GNP and its distribution by types of expenditure. The estimates were also considered approximations, especially for fiscal years 1962 to 63, 1963 to 64, 1964 to 65, and 1965 to 66 because the available statistical data only allowed approximate estimates of the national accounts.[8]

A study published by the Kuwait Institute of Economic and Social Planning in the Middle East indicated that the data available did not permit the preparation of a comprehensive system of national accounts.[9] Nevertheless, the study estimated some of the more important aggregates, such as gross domestic product and gross national product, at market price, and by type of expenditures.

Exhibit 1 reports the national income estimates for the period 1962-63 to 1966-67 with no distinction between factor costs and market prices. Exhibit 2 provides national accounts estimates at current price for the period 1967-68 to 1969-70. Net national product and income data are given in exhibit 3 while exhibit 4 reports capital and savings for the period 1970-71 to 1975-76.

The Status of the Accounting Profession in Kuwait

The accounting profession in Kuwait is still in its infancy. The first statute to regulate accounting was enacted in 1962. It was a necessary first step for the orderly development of the accounting profession. This law did not, however, treat accounting in a comprehensive manner. Another significant act of legislation which has had an effect on accounting in Kuwait is the Law of Commercial Companies (Law No. 15 of 1960). It provided the legal basis for corporate financial reporting and at the same time required each company to appoint an

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[5]As of August 1979, the exchange rate was DLR 3.60 per 1 KD.

[6]The International Bank for Reconstruction and Development, *The Economic Development of Kuwait* (Baltimore, Md.: Johns Hopkins Press, 1965), pp. 2-3 (hereafter cited as IBRD).

[7]IBRD, p. 164.

[8]The Planning Board, *Survey of Economic Conditions in Kuwait* 1963-64 to 1967-68 (Kuwait: Al-Rissalah Press, 1968), p. 29.

[9]Sivasubramanian and Abdulla M. Ali, *National Accounts of Kuwait* 1965–66 to 1967–68 (Kuwait: Moghawi Press, 1969).

Exhibit 1. National Income Estimates (In millions K.D.)

	1962 1963	1963 1964	1964 1965	1965 1966	1966 1967
1. Consumption	268	281	302	303	330
Private	188	192	200	198	210
Public	80	89	102	105	120
2. Gross fixed capital formation	78	92	96	113	137
Private and semi-private	45	47	49	70	73
Public	33	45	47	43	64
3. Increase in stocks	7	3	3	7	13
4. Expenditure on consumption and gross capital formation	353	376	401	423	480
5. Export excluding oil and oil products FOB	8	10	12	15	21
6. Export of oil and oil products FOB	414	434	468	490	505
7. Expenditure on gross domestic product and imports	775	820	881	928	1006
8. Less imports of goods and services	−122	−141	−141	−176	−208
9. Expenditure on gross domestic product	653	679	740	752	798
10. Net factor income transactions with the rest of the world	−193	−179	−198	−187	−196
11. Expenditure on gross national product	460	500	542	565	607
12. Less depreciation	−19	−25	−28	−34	−36
13. Net national product or national income	441	475	514	531	571

Source: The Planning Board, *Survey of Economic Conditions in Kuwait, 1963-64 to 1967-68*, p. 130.

auditor. The third statute which has affected accounting in Kuwait is the Law of Commerce (Law No. 2 of 1961) which stipulated the requirement for the commercial books of the business. In all cases, the firm is obliged to keep at least two books, the daily journal and the inventory book.

These laws have influenced the development of accounting and increased the volume of accounting work for both the companies and the accountants of Kuwait. On the other hand, the rigidity specified by the provisions of these laws contributed to the slow development of the accounting profession.

The Kuwaiti accounting profession is still without a uniform body of generally accepted auditing standards and a statement of generally accepted accounting principles. In addition, no code of professional ethics has been developed. Kuwaiti accounting practice is derived

Exhibit 2. Kuwait: National Accounts Estimates at Current Market Prices 1967-68 — 1969-70 (K.D. Million)

	Fiscal year ending March 31	*1967,68*	*1968,69*	*1969,70*
1.	Private consumption	280	297	303
2.	Public consumption	135	144	153
3.	Gross fixed capital formation	163	154	151
	(a) Public sector	(68)	(54)	(62)
	(b) Private and semi-private sectors	(95)	(100)	(89)
4.	Net change in stocks	23	17	19
5.	Exports of goods & services	519	587	630
	(a) Exports excluding oil & oil products, f.o.b.	(21)	(28)	(33)
	(b) Exports of oil & oil products, f.o.b.	(498)	(559)	(597)
6.	Imports of goods and services	−248	−248	−269
7.	Gross Domestic Product (GDP) at market prices	872	951	987
8.	Indirect taxes less subsidies	− 4	− 4	− 4
9.	GDP at factor cost	868	947	983
	of which value added by:			
10.	Agriculture & fisheries	5	5	5
11.	Oil & natural gas	474	530	557
12.	Manufacturing	34	37	36
13.	Construction	43	42	39
14.	Electricity, gas, water & sanitary services	28	31	36
15.	Transportation, storage & communications	30	33	35
16.	Wholesale & retail trade	80	84	85
17.	Banking, insurance & other financial services	15	17	18
18.	Ownership of dwellings	45	47	44
19.	Public administration & defense	50	52	55
20.	Services	64	69	73
21.	Net factor income transactions with the rest of the world	−138	−158	−147
	(a) Factor income transfers by concessionary oil companies	(−220)	(−248)	(−251)
	(b) Income on government foreign assets (inc. KFAED and the Central Bank)	(28)	(30)	(41)
	(c) Income on commercial banks' assets	(18)	(21)	(23)
	(d) Income on private investment (net)	(36)	(39)	(40)
22.	Gross National Product (GNP) at market prices (7 + 21)	734	793	840
23.	Capital consumption	−42	−45	−50
24.	Net national product or national income at factor cost (8 + 22 + 23)	688	744	786

Exhibit 2. (cont.)

	Fiscal year ending March 31	*1967,68*	*1968,69*	*1969,70*
	of which:			
25.	Compensation of employees	183	195	208
26.	Income from farms, professions and other unincorporated enterprises received by households	85	93	96
27.	Income from property received by households and private nonprofit institutions	123	133	138
28.	Saving of corporations	9	9	9
29.	Direct taxes on corporations	183	206	213
30.	General government income from property and entrepreneurship	109	112	128
31.	Less interest on public debt	—	—	—
32.	Less interest on consumers' debt	− 4	− 4	− 6

Source: The Planning Board, *The Kuwait Economy 1969 to 1970*, (Kuwait: Kuwait Government Press, 1970), pp. 14-15.

from American and European practices. So far, nothing has been done to develop accounting principles and auditing standards and procedures specifically applicable to the legal and economic environment of the state of Kuwait.

RELATIONSHIP BETWEEN DEVELOPMENT PLANNING PROCESS, NATIONAL INCOME, AND ACCOUNTING

There are organic and conceptual relationships between national income and accounting. These relationships have been recognized by an American Accounting Association (AAA) study:

> The national income and product accounts and the national balance sheet are comparable to enterprise accounting's income statement and balance, the flow of funds account compares to the statement of changes in financial position.[10]

The calculation of national income in Kuwait was unreliable until 1966 because of limitations in the statistical data[11] which can be seen

[10]Committee on International Accounting Operations and Education 1976 to 78, *Accounting Education and the Third World* (American Accounting Association, 1978), p. 9 (hereafter cited as the AAA Study, 1978).

[11]In 1962, the Central Office of Statistics was established and conducted a number of studies and surveys. The information provided by these studies has somewhat improved national income estimates.

Exhibit 3. Net National Product and Income (1970-71 to 1975-76)

	1000 K.D.					
Components	*75 76*	*74 75*	*73 74*	*72 73*	*71 72*	*70 71*
Private final consumption	705,700	519,780	353,251	309,396	313,790	266,202
Government final expenditures	602,679	691,170	410,700	322,124	308,100	256,700
Net savings	2,006,800	1,780,865	862,506	474,157	343,690	220,429
Appropriation of net national product	3,315,179	2,992,115	1,626,457	1,105,677	965,580	743,331
Payments to households	561,460	416,468	347,790	342,255	265,000	240,155
Net property & entrepreneurial income to the rest of the world	224,000	(280,820)	(342,207)	(336,394)	(264,520)	(109,745)
Operating surplus	2,497,715	2,405,258	1,489,479	970,976	853,500	524,296
Indirect taxes	32,004	451,209	131,395	128,840	111,600	88,625
Net national product	3,315,179	2,992,115	1,626,457	1,105,677	965,580	743,331

*Figures in parentheses are negative

**Exhibit 4. Capital and Savings
(1970-71 to 1975-76)**

	1000 K.D.					
Components	*75/76*	*74/75*	*73/74*	*72/73*	*71/72*	*70/71*
Government gross fixed capital formation	139,700	112,900	92,800	101,628	71,500	62,600
Private gross fixed capital formation	106,645	63,060	53,891	51,683	48,000	46,495
Change in stocks	9,334	6,668	(1,007)	1,262	1,000	849
Net purchase of intangible assets from the rest of the world	1,851,180	1,770,560	729,650	275,510	251,930	121,340
Net lending to the rest of the world	64,000	20,150	(630)	9,650	(3,070)	(2,690)
Residual (errors & omissions)	50,000	28,480	6,080	41,420	66,020	—
Gross accumulation	2,220,859	2,001,818	880,784	481,153	435,380	228,594
Consumption of fixed capital	188,059	177,413	142,808	120,096	116,500	108,385
Net savings	2,006,800	1,780,865	862,506	474,157	343,690	220,429
Net capital transfers from the rest of the world	26,000	43,540	(124,530)	(113,100)	(24,810)	(100,220)
Finance of gross accumulation	2,220,859	2,001,818	880,784	481,153	435,380	228,594

*Figures in parentheses are negative.
Source: Ministry of Planning, Central Statistical Office, *Annual Statistical Abstract*, Edition XV, 1978.

in exhibit 1. Exhibit 2 includes more detailed data and provides a clearer picture of the dependence of national income accounting on business accounting. Many items in exhibits 1, 2, 3, and 4 can be derived directly or indirectly from business reports. Some examples which substantiate this assertion follow. In exhibit 1, items 2 (gross fixed capital formation), 3 (stocks), and 4 (expenditure on consumption and gross capital formation) are based on business accounting reports. Moreover, the national product data (exhibit 3) are derived largely from the business reports.

In addition, questions can be raised as to the reliability of these figures. For example, it appears that the depreciation figures are defective in three respects. First, the method used to determine the amount of depreciation had the depreciation amount in the plan as KD 80 million in base year net national fixed assets. "In reality, this was an informed guess based on the assumption that fixed capital depreciates in Kuwait at the rate of 10 percent per annum; . . ."[12] Second, the amount of depreciation is based on historical cost. Third, because of lacks in managerial and technical skills, improper use by labor causes the actual rate of damage to fixed capital to be greater than usual. This abnormal damage should have been included in the depreciation figure.

Another question can be raised as to the reliability of the stocks (inventory) amounts representing the changes in stocks. Data on the quantity and value of stocks of various commodities held and of their changes over time do not exist in Kuwait. Estimates are therefore nothing more than informed guesses.[13] These amounts, then, are not computed from individual business reports but are only estimates. Price-level changes are also ignored.

"To better allocate scarce human, financial and material resources, all countries require some form of economic planning or programming."[14] Sound accounting could improve the reliability of planning at the macro stage by providing more realistic information. For example, the planners in this stage determine the amount to be invested to achieve the targeted rate of growth. This means the planners must compute the capital-output ratio. The reliability of this ratio depends on the reliability of the investment and national product data. The more accurate these figures, the more realistic the amount to be invested to attain the target rate of growth. As stated earlier, these amounts are based on accounting information. Thus

[12]The Plan, 1968-69 to 1971-72, p. 44.
[13]Sivasubramanian and Ali, *National Accounts of Kuwait*, p. 44.
[14]The AAA Study, 1978, p. 11.

this ratio will depend on the reliability of the accounting data and the accurate classifications. In computing the capital-output ratio, Enthoven recognized that

> Capital output ratios, reflecting the quantities of output resulting from a unit of capital input are used as either measuring or policy-making devices in micro and macrodevelopment programming. In the microsphere they portray the resulting national income from capital investment—again largely based upon industry (accounting/statistical) data. In computing the gross net or marginal capital/output ratios, the "value" and composition attached to capital equipment, depreciation and output are of vital concern. Capital outputs or value outputs should be included or excluded according to realistic accounting information and classification.[15]

Another area in which accounting reports can be useful is the determination of the amount of saving in society. If financial accounting reports are reliable and realistic, the amount of saving could be computed from business financial accounting reports. The retained earnings represented in the income statements of the individual firm could be used as a basis for the computation of the national income savings needed to achieve the target rate of growth.[16]

Many terms used by the economic development planners in Kuwait should be clarified. "The main problem has been reconciling the inconsistencies between data series from different sources."[17] For example, in exhibit 1, item 12 is called "depreciation" and in exhibit 2, item 23 is called capital "consumption." Apparently, both figures refer to depreciation.

SUMMARY AND RECOMMENDATIONS

This paper has addressed the relationship between accounting and development planning process of an emerging nation such as Kuwait. The discussion identified certain areas in which accounting can facilitate the development planning process in Kuwait. At the macro stage, the planners determine a target rate of growth for the whole economy. The determination of the growth rate requires the calculation of incremental capital-output ratio, saving, and the percentage of gross national product to be invested to achieve the target rate of

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[15]Adolph J. H. Enthoven, "Accounting and Development Programming," *International Journal of Accounting* (Fall 1967): 113; also for more discussion on capital output (capital coefficient), see idem., *Accountancy and Economic Development Policy* (Amsterdam: North Holland Publishing Company, 1973), pp. 156-60.

[16]Ralph V. Lucano, "Relationship between Financial and National Income Accounting," *Federal Accountant* (March 1962): 17.

[17]Report prepared by Stanford Research Institute, *Social and Economic Impacts of the Kuwait Government Compensation Increase of 1971-1972 and Recommended National Compensation* (Menlo Park, Calif.: Stanford University, 1973), pp. B-7.

growth. All these concepts are largely based on accounting data. National income accounts are concerned with measuring the economic performance and progress of a nation. The national income accounts are based, to a significant extent, on accounting information.

Financial accounting reports represent a basic source of information in the quantification of these aggregate concepts. Therefore, if the financial accounting information at the individual firm reports is defective and unrealistic, then the aggregate data will show the same deficiencies.

The development of the accounting profession in Kuwait is still in its infancy. There is no code of professional ethics, generally accepted accounting principles, or auditing standards. This suggests that the information available from business reports does not fulfill the information requirements of the development planning process in Kuwait.

Since development planning process requires, among other things, a better organized accounting profession, it is recommended that:

1. To meet the challenge of the development planning process in Kuwait, an organized accounting profession must exist. The accounting profession has a tremendous opportunity to help speed the process and to establish itself in society as the protector of the public interest. The profession should take the lead in analyzing the accounting principles and auditing standards and procedures which are presently used. Such an analysis would contribute to the subsequent codification of acceptable accounting practices in Kuwait.
2. To be effective, acounting terms and concepts and their definitions must be clarified throughout the planning process in Kuwait, at both the micro and macro levels. A clarification of accounting concepts will facilitate and enhance the understanding of the users of the national accounts.
3. A study of the information needs of development planning process should be undertaken. This type of study requires the identification of measurable goals and objectives, quantification procedures, and the application of evaluation procedures, such as planning, programming, a budgeting system, and zero-base budgeting. Sound economic development accounting is vital to the development planning process in Kuwait. The introduction of economic development accountancy will facilitate the establishment of an effective governmental system equipped with capable managers and accountants. The need for economic development accountancy was recognized by the AAA study:

To cater effectively to the needs of socioeconomic development, a distinct body of knowledge called economic development accountancy may be required. Economic development accounting can be described as the application of existing and potential accounting systems, techniques, procedures and data to enhance economic development within a nation and among nations.[18]

4. To meet the information needs of the development planning process in Kuwait, the government must establish a comprehensive information system for the storage and retrieval of financial, managerial, economic, and technical data related to the planning process. This system would enable governmental units to monitor the plan, exercise coordination and control, and measure performance. Also, it would profide information needed for planning process.
5. Effective uniform accounting standards can provide accurate, comparable, and reliable information for policy makers in economic sectors to make optimal decisions. Uniformity of presentation could improve the national accounts. The normative concept of uniformity may be desirable in Kuwait. However, uniformity should be accompanied by continuing review and evaluation. It should retain the flexibility necessary to respond to economic changes.

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[18]The AAA Study 1978, p. 20.

The Role of Accounting in Project Evaluation and Control: The Syrian Experience

ADNAN ABDEEN*

Accurate and reliable information is necessary for the successful planning and controlling of economic activities in both developing and developed countries. It is the function of the accountant to select the relevant aspects of economic events, organize and summarize them, and subsequently report them for further use by interested parties. The economist is likely to use accounting techniques for different problems for which data are marshalled.[1]

The traditional concern of the field of accounting has been to provide historical financial data of economic activities. In recent years, the trend has been to emphasize the economic decision-making function because of the utilization of the accounting data for planning and projecting future economic activities.[2] In several countries (for example, France and Germany), the emphasis of the accounting process has shifted even further toward the national economic goal orientation. Several developing countries have adopted standardized accounting systems for business enterprises.[3] These systems may remedy the problem of deficient and disorganized economic and financial data which exist in the developing countries.

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The author is indebted to Dr. Dora Herring of Mississippi State University for valuable comments on an earlier draft.

[1]B. Van Arkadie and C. Frank, *Economic Accounting and Development Planning* (London: Oxford University Press, 1966), p. 3.

[2]Yuji Ijiri, "Critique for the APB Fundamental Statement," *Journal of Accountancy* (November 1971): 45.

[3]Adolf J. H. Enthoven, "Standardized Accountancy and Economic Development," *Finance and Development* (March 1973): 31.

In most of these countries, the economists usually assume the responsibility of performing the role of policy advisors and planners or economic activities. The subject of business accounting, interindustry accounting, and social-national accounting techniques is of interest to these economists because they are faced with many decisions that demand the use of various accounting techniques for their solutions.

This paper focuses on the role of accounting techniques and practices in the evaluation of capital investment decisions. It introduces the reader to the evaluation and decision-making process used to select industrial projects as practices in the developing country of the Syrian Arab Republic. The extent of involvement of accountants and accounting techniques in the planning and control of industrial projects included in the Syrian economic plan is also discussed.

ACCOUNTING AND PROJECT APPRAISAL

The World Bank has interpreted *projects* to mean proposals for capital investment to develop facilities to provide goods or services.[4] The investments may consist of building entirely new facilities or the expansion or modernization of existing ones. The techniques of project appraisal are equally applicable to the preparation of data and the assessment of projects by private businesses or government agencies in all countries, including the developing countries.[5] Project appraisal is an important element in the formulation of coherent economic programs that comprise the framework for the country's economic development activities. Because of the lack of capital in most developing countries, investment decisions should consider economy and efficiency. Drawing on the experience of the World Bank, in appraising a project, the Bank's officials are rather skeptical of the information related to any project proposed to them for loan consideration. This skepticism is applied to economic, technical, institutional, and financial aspects of the project appraisal, beginning with a questioning of the basic statistical data to ascertain that a false sense of accuracy is not reached through the application of sophisticated techniques of analysis to questionable basic data.[6]

When appraising the feasibility and justification of projects and their components, extensive use of past, present, and future data is

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[4]John A. King, Jr., *Economic Development Projects and Their Appraisal* (Baltimore, Maryland: Johns Hopkins Press, 1967), p. 3.

[5]Ibid., p. 4.

[6]Hugh B. Ripman, "Project Appraisal," *Finance and Development* (December 1964): 178.

made. The cost-benefits calculations require information which is often based on historical data modified for economic and price changes. The historical data are based on accounting techniques, a knowledge of which is important to assess its usability. Furthermore, the information should be economically realistic and have comprehensive standardized content. For example, the use of tables for standardized labor inputs per production process, raw material requirements, power, and fuel needs for each scale of output and installation cost would be recommended.[7]

To investigate the project from all aspects, the need for experts in many fields becomes apparent. The cooperation of economists and accountants is of utmost importance, because they are in a unique position to understand the methods and techniques used in the accumulation of the information. They are also able to relate and analyze the data, not as related to the feasibility and profitability of the project itself, but as they fit into the overall development plan of the country. It is unfortunate that the supply of skillful economists and accountants in the developing countries is limited.

The economic aspect of project appraisal involves the question of priorities in the economy. The analysis of the economy provides reasonable estimates of the general level of future requirements for goods and services, and thus indications of the relative priorities of various projects are indicated. This aspect also involves the justification of the use of scarce resources needed for economic development such as investment capital, managerial talent, skilled labor, and the like. This aspect also requires the study of the market demand for the goods and services to be provided by the project.

The first indication of economic justification of a project can be determined by calculating its commercial profitability and by finding the effect of the project on the balance of payments of the country. The latter aspect is very important in a country that suffers from shortages of foreign exchange. The commercial profitability involves the application of accounting techniques and principles to arrive at the annual net income from the operations, often referred to as the accounting income. Once the estimated annual accounting income over the life of the project is determined, then the accounting methods for evaluation of investment in projects can be utilized. These methods are the payback period, the average return on investment, the present-value method, and the discounted cash-flow method. The discounted

[7]Enthoven, "Standardized Accountancy and Economic Development," p. 30.

cash-flow method is more promising than the other methods, which are considered to be crude approximations of profitability of investments.[8]

Commercial profitability of the project is not a sufficient criterion for the evaluation of projects. The national economic profitability is of vital importance and should be considered. Such importance arises from three sets of factors.[9] First, the market mechanism in developing countries (and even in developed countries) does not always reflect relative scarcities. Such scarcities relate to the true social costs of various inputs which make the market prices unreliable when arriving at the materials cost of the project. The market wage rate, used in arriving at the total wage cost of the project, does not accurately reflect social opportunity cost of labor in countries where there is a surplus of labor. Furthermore, the prevalent rate of interest often does not reflect the relative scarcity of capital, that is, the productivity of capital investment.[10] Secondly, commercial profitability does not necessarily consider the rate of growth of the national economy, the expansion of employment opportunities, and the reduction of inequality among various income groups and regions.[11] Third, the rate of interest in any country supposedly reflects the time preference of that country, attaching relative weight to present consumption compared with future consumption. The fact is, however, that conditions of perfect competition are not found in any country, least of all in developing countries. In addition, the decision as to the social time preference between present and future consumption cannot be left to the market mechanism in most of the developing countries seeking to accelerate economic development.[12]

The commercial profitability aspect of the appraisal lends itself easily to quantitative measurements and so, to a lesser extent, the national economic profitability. There are other important economic considerations, however, that are not entirely measurable, such as the

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[8]A. Alfred and J. B. Evans, *Appraisal of Investment Projects by Discounted Cash* (London: Chapman and Hall, 1971), p. 2.

[9]United Nations, Bureau of Technical Assistance Operations, *Report of the Interregional Symposium on Industrial Project Evaluation* (ST/TAO/SER.C/82), 1966, pp. 5-6.

[10]Ibid.; as far as interest charges are concerned, the problem in the accounting method is even more unreliable because accountants include in the total costs and expenses only interest charge on loans where the economists include interest charges on the entire capital invested, recognizing the opportunity cost involved. For comparison between the accounting and economic costs, see Micha Gisser, *Introduction to Price Theory* (Scranton, Penn.: International Textbook Company, 1966), pp. 102-4.

[11]United Nations, Report of the Interregional Symposium, pp. 5-6.

[12]Ibid.

interindustrial aspects of the project. These include the cost of supporting or servicing facilities, such as transport and power, and on the benefit side, they include the benefits derived from the project in terms of using its output as needed input of other industries or sectors of the economy. Furthermore, the new project may generate new economic activities linked to existing or proposed economic units.

In addition to the preceding considerations, the appraiser considers the examination of the vital aspects of financing the project during the construction period as well as during the period of operations. These may include the domestic or foreign sources and application of funds, the liquidity of the business, and the capital structure. The determination of the required working capital during the construction and operations stages is very important to spare the project from serious difficulties such as delays, loss of skilled labor, excessive costs, and other difficulties due to shortages of funds. Such an analysis also helps to formulate the plans for short-term financing, an issue that is relevant even when the project is financed by government through its lending agencies. Exploration of several domestic and foreign financial institutions will follow to secure the best credit terms possible. The economist who appraises the project, as well as the official of the lending institution who reviews and appraises it, usually has many questions to ask about the basis of the projected data included in the project study. When the project deals with an expansion or addition to an existing industry, some of the amounts included in the financial projections are based on previous experience depicted in the past financial statements prepared by the accountant. However, when the project is entirely new to the country, the data are based on the experience of other countries and supplied by foreign experts or by local engineers who make the technical evaluation. Ripman has cautioned the evaluator of a project, when examining its financial aspects, to examine the proposed financial statements. He has raised several questions regarding the financial statements, such as what accounting method is used in valuing the fixed assets; what method or methods of depreciation are used; how much of the profits are distributed and how much are reinvested; whether inventories are valued conservatively; whether there are unlisted or contingent liabilities; and whether there are any hidden reserves not appearing on the balance sheet.[13]

The accounting practices and techniques play, then, an important

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[13]Ripman, "Project Appraisal," pp. 182-83.

role in project planning. This role is extended further to managerial control and decision-making aspects of the operations to follow. The acceleration of economic growth depends on the success of these planned projects.

The other aspects of project appraisal are beyond the scope of this research; however, it is important to note that most of the other aspects have financial implications. The coordination of all aspects of the project is definitely that of leading the project to a successful start and of culminating in a meaningful and efficient operation that leads to a successful implementation of economic plans.

The comments just presented are, by necessity, oversimplified and limited to the role of accounting in the economic and financial evaluation of capital investments. They do not reflect fully the complexity of the process of project appraisal. The application of the techniques involved in the process may differ from country to country but the general principles thereof do not. Such a process is examined next as it applies to the evaluation of projects included in Syria's economic plans.

PROJECT APPRAISAL IN SYRIA

Industrialization is accomplished by either introducing new large-scale industrial projects or through the modernization or expansion of existing industries. However, there are several constraints placed on industrial development, such as the scarcity of capital, technicians, managers, and foreign exchange. These constraints make the selection of projects a crucial element in the process of accelerating economic growth. Industrialization is an important facet of economic development in Syria because it provides employment for the unemployed surplus workers in agriculture, raises the standard of living of the masses, and assures the full utilization of the country's productive resources.[14] The success of industrialization in Syria and the achievement of the highest return possible on investment in industrial projects is dependent on the proper selection and implementation of projects by the organizational structure for planning; control which will be introduced first, and then the process of project appraisal will be described and evaluated. Moreover, the involvement of accountants and accounting techniques in the planning and control of projects is explained.

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[14]Business Institutions Graduate Association, *The Second Conference on Mobilization of Economic Resources for Development and Defense* (in Arabic) (Damascus: Tarabishi Press, 1971), p. 406.

THE ORGANIZATIONAL STRUCTURE FOR ECONOMIC PLANNING AND CONTROL

In Syria, the function of preparing detailed studies of the proposed projects, as well as the follow-up on implementation of these projects, is undertaken by small planning units attached to and under the direct authority of their respective administrative, economic, or cooperative organization. These units are in constant contact with the State Planning Organization that exercises functional authority over them. This organization is staffed by specialists in evaluation of projects and in formulating the short- and long-range economic and social plans of the country. The proposed project studies pass through the State Planning Organization as they move toward final approval by the Supreme Planning Council, the highest planning authority in the country.

The planning and control organization structure is rather complex and involves several organizations (see exhibit 1). All these organizations focus their attention on the expanding public sector, but one must remember that most of the decisions and plans formulated by these organizations affect the private sector as well.[15] The private sector is composed mainly of retail merchants and entrepreneurs involved with small industries. Any entrepreneur may seek statistical, technical, and other information from the Ministry of Industry when formulating plans for the establishment of a new industry.

THE REQUIREMENT FOR PROJECT APPRAISAL STUDIES

The State Planning Organization has provided the planning units of each industry with detailed instructions and recommendations for the preparation of the quantitative and financial aspects of project studies. Each project study should include (1) a description of the project, (2) a statement of estimated total project cost, (3) a statement of estimated annual production costs and expenses, (4) a statement of annual revenues, (5) the present-value schedule of cash flow, and (6) a conclusion of the study.[16]

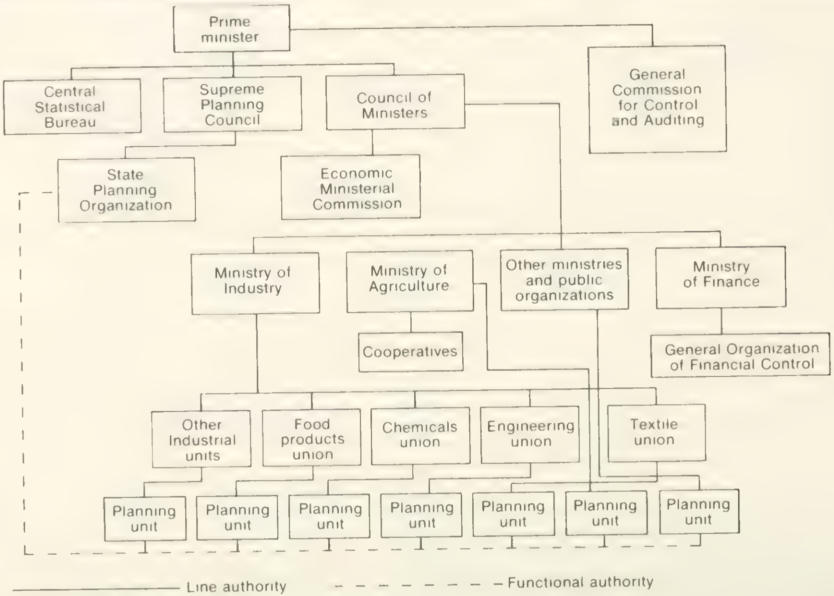
Description of the Project

Description of the project includes the name of the organization initiating the project, the commodity to be produced, the market condition, and the method of distribution. The description also

[15]For details on the major functions of the planning and control organizations, see Adnan Abdeen, "The Role of Accounting in the Economic Development of Syria" (D.B.A. Dissertation, Mississippi State University, 1974), pp. 57-58.

[16]S. A. R., State Planning Organization, "Guide to Project Appraisal" (in Arabic), mimeographed (Damascus, 1972), p. 1.

Exhibit 1. Organization Structure for Economic Planning and Control in the Syrian Arab Republic



Source Original Based on Decrees No 81, 86, 87, 93, and 182 of the Syrian Arab Republic (Damascus, 1965-1969)

Source: Original. Based on Decrees No. 81, 86, 87, 93, and 182 of the Syrian Arab Republic (Damascus, 1965-1969).

includes the needed machinery and materials, the annual capacity, the proposed location, and the required skilled and unskilled labor.

Statement of Estimated Total Project Cost

The statement of estimated total project cost includes a detailed listing of fixed and working capital needed for the project and the complementary investments in other projects. An examination of this statement revealed that there is a distinction between capital expenditures and revenue expenditures. The fixed investment cost required includes the tangible and intangible assets. The cost of these assets includes not only the original purchase price, but also other expenditures required in obtaining and readying the assets for the purpose for which they will be used. The required working capital includes the cost of the minimum raw materials and supplies needed, and the liquid monetary assets which are comprised of funds required for labor and other overhead expenditures. The latter is estimated to be the total annual manufacturing costs (excluding depreciation, interest, and the minimum required inventories) divided by the operating cycles of the business. The number of operating cycles is calculated by dividing the number of days between the date of purchase of raw materials and the date of sale of the finished project into 365 days. The total investment in the project also includes any complementary investment needed but not necessarily owned by the project. Furthermore, all investment outlays should be separated into domestic and foreign to determine the foreign-exchange needs of the project.

Statement of Estimated Annual Production Costs and Expenses

The statement of estimated annual production cost and expenses includes the cost of material and supplies, labor, and other expenses which include taxes, depreciation, rent, and interest. The depreciation expense is based on the straight-line method applied to the historical cost of the fixed assets in agreement with the method and bases used in the standardized accounting system, a reporting system required for all public sector industries. The distinction between domestic and foreign funds annual outlays is also required in this statement.

Statement of Annual Revenues

The statement of annual revenues includes descriptions of the market (foreign and domestic), the customer, and the basis used to arrive at the quantities and amounts of sales and other revenues. According to the instructions of the State Planning Organization, the basis for

determining the expected selling prices should be clearly stated. Furthermore, the instructions indicate that sometimes it is possible to sell at lower prices on the foreign market in order to operate at maximum capacity and generate foreign exchange.[17]

The Present-Value Schedule of Cash Flow

The financial information required for project appraisal is geared to the present-value method of evaluating capital investment. The information is included in the present-value schedule of cash flow which shows the flow of funds on an annual basis (see exhibit 2).

Conclusion of the Study

The conclusion of the study includes a statement of approval or disapproval of the proposed project. The approval of the project is dependent on its economic feasibility, which is referred to as the realization of surplus or excess of the present value of surplus profit (net cash inflow) over the present value of investment costs.

EVALUATION OF THE REQUIREMENTS FOR PROJECT APPRAISAL STUDIES

An examination of the instructions provided by the State Planning Organization for project appraisal studies reveals several important features. The language and style of directives and explanations are rather simple. Step-by-step instructions are provided to facilitate the work of the staff members in the planning units. Moreover, the terminology, formats, and account numbers are in agreement with the standardized accounting system. This is a very important feature that facilitates control once the project is approved because the actual accounting data supplied by the standardized system could be compared with the budgeted data. This could be done, not just during the construction state, but also during the operating stage.

The statement of estimated project cost is rather comprehensive and appears to be adequate. However, the statement of annual production cost shows no distinction between manufacturing, selling, and administrative costs and expenses. There is also no separation of fixed and variable costs which facilitates marginal analysis, differential cost analysis, and break-even analysis. In addition, there is a possibility, as stated earlier, of selling the product at lower prices on the foreign market in order to operate at maximum capacity and generate foreign exchange. Without the knowledge of fixed and variable costs of production, a decision on the selling price becomes

[17] Ibid., p. 15.

Exhibit 2. The Present-Value Schedule of Cash Flow

Year	*1*	*2*	*3*	*4*	*5*	*6*	*7*
	Investment cost Fixed capital, working capital additions, exchanges and renewals	Annual production costs accounts*	Annual revenues, domestic & foreign**	Surplus profits, col. 3 – col. 2	Discount factor at 7%	Present value of investment cost, col. 5 x col. 1	Present value of surplus profits, col. 5 x col. 4 col. 4

*The costs exclude taxes and production fees, depreciation, and interest.

**In the last year of the project, the amount should include any cash inflow realized from the sale of assets, returnable deposits, the working capital, and the sale of intangibles, etc.

Source: S.A.R., State Planning Organization, "Guide to Project Appraisal," mimeographed. Supplement (Damascus, September 1972).

rather difficult. The decision maker needs to know the contribution margin before lowering prices on merchandise sold on the foreign market.

When computing the present value of net cash flow (surplus profits), taxes, production fees, depreciation, and interest charges are excluded from the cash outflow needed for the cost of production (see column 2, exhibit 2). The exclusion of depreciation is justified because depreciation does not require cash outflow, but the exclusion of taxes, production fees, and interest charges is debatable. It may be that these cost items are excluded because they are paid to the government and are considered to be transfer payments. They should be included, however, because in determining the feasibility and the profitability of the investment, the project should be considered as a separate entity from those who own it. Furthermore, if the project were financed by loans from a foreign country or loans from foreign financial institutions, the interest charges would not then be considered transfer payments.

In spite of the insufficiency of information previously mentioned, this method of project appraisal is an improvement over earlier methods used in project studies made by the planning authorities. For example, for the study of investment in a fertilizer plant, the present-value method was used. In this method, uniform cash flow over the life of the project and a discount factor of 15 percent were used. A 10 percent factor was also used for purposes of comparison. The planners also used the full capacity of the project in the calculation. It is rather an optimistic view, because it must be remembered that the plant may suffer several starting problems and adjustments during the beginning life of its operations and a slowdown due to old machinery and equipment during the latter part of its life. The use of an estimated fixed selling price is not sound because it is not realistic to assume that any price will stay the same. This is due to probable shortages on the domestic or the international market or due to increases in the costs of production. The price may even decrease if new technology is introduced that reduces the cost of production. Furthermore, it was assumed that the plant will sell all of its production. This optimistic view deviates from the reality of the market conditions.

The new method of calculating the present value (as illustrated in exhibit 2) remedies some of the deficiencies of the earlier methods used in project studies such as the study of the fertilizer plant because the flow of revenues is not uniform due to expected fluctuations of sales quantities and prices.

THE INVOLVEMENT OF ACCOUNTANTS AND ACCOUNTING TECHNIQUES IN THE PLANNING AND CONTROL OF PROJECTS

To gain more insight into the appraisal process and to determine the actual involvement of the accountants and the use of accounting techniques in the planning and control of the proposed project, an interview was arranged with the assistant to the Minister of Planning in the State Planning Organization. Most of the following statements are based on this interview.

In the planning stage, there seems to be a great degree of reliance on accountants and accounting techniques for the appraisal of a project that involves the expansion of existing industries. The Organization relies on engineers and/or foreign experts in evaluating the new projects. However, accounting techniques and principles are used in arriving at the expected profit and return on investment for both types of projects.

To determine the revenues from a project, the quantities to be sold on the domestic market are estimated on the basis of income elasticity of demand. In some cases, this may involve the inclusion of the combined demand of neighboring countries because of smuggling, close trade relations, and movement of goods between these countries. In arriving at the expected selling prices, the prevailing selling prices on the domestic market are considered. However, the total cost of production is normally compared with foreign prices (excluding custom duties). Whenever the foreign price is lower than the projected cost, the project may not be approved. However, if the freight and insurance charges were added to the foreign price and the total was greater, equal to, or slightly lower than the cost, the project may be approved.

Whenever the cost exceeds the revenues from the projects, other social benefits may be considered. The accounting profit is emphasized when appraising a project, but it does not dominate the decision. For example, for the projects included in the third five-year plan, the accounting profit was used in appraising and justifying the capital investment.[18]

To analyze the project, some other economic bases are used to supplement the accounting profit criteria.[19] These bases include the following items. First, they include the ratio of the total increase in national income from the project to the total capital invested in the project. This ratio indicates the degree of dependence on capital

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[18]Business Institutions Graduate Association, *The Second Conference*, p. 414.
[19]Ibid., p. 412.

rather than on labor. In addition, the period needed for completing the project is determined. This period shows the length of time the investment funds are unavailable before funds are generated from the project. Moreover, the bases include ratios related to foreign-exchange use such as (1) the ratio of the needed foreign exchange for completion of the project to the total funds outlays needed for completion, (2) the annual savings of foreign exchange to the invested capital, and (3) the total domestic raw materials needed for production to the total raw materials needed for production. Finally, other strategic considerations, such as giving preference to the production of consumer goods or the production of capital goods, are considered.

These ratios are helpful in assessing the effects of the capital investment on certain aspects of the economy. However, the crucial element in making the decision is the profitability of the project which is based on the present-value method of cash flow. In the calculation of the present value, the organization uses the 7 percent factor (see column 5, exhibit 2), but in the past, the organization used 10 percent and 15 percent factors.[20] The 7 percent factor seems to be low and unreliable in this case, because all the banking and financial institutions in Syria are nationalized, and their interest rates are set by government authorities. In the case of the developing countries, where the return on capital investment is rather high, the discount factor should not be less than 15 percent.[21]

The problem of choosing an interest rate or a discount factor in a largely state-controlled economy is rather complex. The crucial point is that when screening investment projects, first priority should be given to those projects that yield higher net productivity.[22] As a solution to this problem, the method of discounted cash flow seems to be more meaningful than the present-value method, because the discount rate is not predetermined, and one can arrive at such a rate by trial and error method and then compare it with some standard. Another advantage of this method was mentioned earlier, that is, the ranking of projects according to their discounted rates. Projects that satisfy the society's wants and yield higher net productivity would then be selected first. After much investment has gone into these projects and the diminishing return has brought down the yield, then one can go to lower net productivity projects.[23]

[20]For illustrations on the use of these factors, see Adnan Abdeen, "The Role of Accounting in Economic Development," pp. 69-71.

[21]Business Institutions Graduate Association, *The Second Conference*, p. 418.

[22]Paul Samuelson, *Economics*, 8th ed. (New York: McGraw-Hill, 1970), p. 580.

[23]Ibid.

The issue of choosing the higher yield projects in Syria is more involved, because first priority is given to those projects that make the country self-sufficient in satisfying the basic needs of the people. It is evident from the interview that the social well-being of the people is greatly emphasized. However, the final decision on the proposed projects is reached by the Council of Ministers, which is headed by the prime minister, upon the recommendations of the Economic Ministerial Commission. At this level, other issues are involved, such as the resulting tax effect of the project, the allocation of government funds for all projects, and the source of borrowing. All these aspects must be kept in mind and must fit into the overall economic and social plans of the country, as well as the national budget.

Once a decision is reached on the projects, another issue is important to the economic development. The issue involved controlling the expenditures for completing the projects as well as the future operations. Without this control, there is no way to assess the efficiency of planning and the professional quality of the officials making the decisions. It is apparent from the interview with the official in the State Planning Organization that studies to compare the estimated data of the appraised projects with the actual data are not made. Such studies are essential to the determination of the profitability of the operations and the assessment of the quality and efficiency of management. The two reasons given for the lack of those studies are the lack of a uniform system of reporting the financial data and the absence of reporting the financial data and the absence of qualified personnel to carry on the task of reliable reporting, including analysis and interpreting of the financial results of operations.

According to the organization chart of economic planning and control, two organizations should perform the legal and financial control function. The General Commission for Control and Auditing should make implementation reports and submit them directly to the office of the prime minister. The other organization is the General Organization of Financial Control, which should perform the financial auditing function and report to the Ministry of Finance. These two organizations are mainly staffed by personnel with a legal background, who normally emphasize the proper documentation of the receipts and disbursements of funds, rather than the economic and financial evaluation of operations.

The officials have great hopes of remedying this deficiency of the control aspect of economic activities on the standardized accounting system. They feel that uniform reporting will produce usable and dependable information that will enable them to evaluate the effi-

ciency of implementation of the projects and improve their planning and decision-making function. This feeling is not necessarily confined to the usability of the financial information in the case of individual firms, but also extends to the interindustries and the national economy. They are also hoping that accounting education will improve at the college level so more qualified graduates in the field of economics and business, especially accounting, will fill the gap of shortages of qualified personnel needed for economic planning and control at all levels and varieties of economic activities.

CONCLUSION

The planning authorities in Syria place great emphasis on project appraisal of information related to commercial profitability and flow of funds. Accountants in Syria seem to be involved in the appraisal of projects dealing with the expansion of existing industries. These accountants are involved to a much lesser extent in projects introduced to the economy for the first time. Instructions provided by the State Planning Organization for project appraisal studies are rather simple and tend to facilitate the work of the staff members of the planning units. The requirements for project appraisal stated in these instructions include several statements that involve accounting techniques and information geared to the present-value method of evaluating capital investment. Furthermore, the accounts in the statements are in agreement with the standardized accounting system, a feature which facilitates control of the approved projects.

Both accounting and economic factors are usually considered in the evaluation of projects. Additional criteria include the overall relationship of these factors to the economic and social plans, as well as the national budget. These criteria are, in fact, taken into serious consideration at higher levels of the organizational structure for economic planning and control.

INSTRUCTIONS TO AUTHORS

All manuscripts submitted for consideration should be typed on 8½ x 11" paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

HEADINGS

All major headings within the manuscript should be in capital letters. They should not be numbered. Subheadings should be in capital and lower case letters on a separate line beginning at the left margin. If third-level headings are used, they should begin at the left margin and should end with a period. The text will follow on the same line immediately.

EXHIBITS

Each exhibit should be titled and numbered. A textual reference should be made to each exhibit. It would be helpful if the author would indicate by marginal notation where each exhibit should be placed. These instructions will be followed as printing practices allow.

FOOTNOTES

Footnotes should be numbered consecutively throughout the manuscript with superscript arabic numerals. Citations should not be made in brackets in the text. Mathematical symbols should not have footnote numbers attached. Entries for books should include author's name, title of the work underlined, and, in parentheses, place of publication, name of publisher, and date of publication. For journals, author's name, title of article within quotation marks, title of journal underlined, date of issue in parentheses, and page numbers should be included. Please see the following examples.

[1]William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2]Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

BIBLIOGRAPHY

Manuscripts may include a bibliography at the end of the paper. If so, such references should contain all data necessary for identification. Citations should be arranged in alphabetical order necessary for identification. Multiple works by the same author should be listed according to chronological order of publication. Examples are listed below.

Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure—The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

MATHEMATICAL NOTATION

Mathematical notation should be stated as simply as possible so as to simplify typesetting. Alignment should clearly indicate superscripts and subscripts. Equations which are numbered should have the numbers in parentheses flush with the left-hand margin.

CORRECTIONS

Gerhard G. Mueller, author of "St. Louis to Munich: The Odyssey of the International Congresses of Accountants," page 1 of the *Journal* (Fall 1979) wishes to note the following concerning his article:

"I am pleased indeed to be able to report a monumental reference error in my 'St. Louis to Munich . . .' paper in the Fall 1979 issue of the *Journal*. My reference to the 'late' Jacob Kraayenhof of the Neatherlands was as 'greatly exaggerated' as the one Mark Twain corrected by cable from London to the Associated Press in 1897."

Rita M. Madonado, author of "Recording and Classifying Transactions in the Balance of Payments" which appeared in *The International Journal of Accounting*, Volume 15, Number 1 (Fall 1979), wishes to express her deep appreciation for generous assistance at every stage to Jack J. Bame, associate director for international economics, Bureau of Economic Analysis, U.S. Department of Commerce; Marie Collins, report specialist, International Research Department, Federal Reserve Bank of New York; and Lawrence S. Ritter of New York University. Invaluable assistance on various points was also provided by David T. Devlin and Robert B. Leftwich, respectively vice president and assistant vice president, Economics Department, Citibank; Louis J. Moczar, Nancy R. Keith, and Russell Scholl, Balance of Payments Section, Bureau of Economic Analysis, U.S. Department of Commerce; and Gary A. Lee, International Capital Reporting System, U.S. Treasury.

Journal of Business Finance and Accounting

Winter 1979 Volume 6, No. 4

Editor: *J. R. Perrin*, University of Warwick, Coventry, U.K.

Contents

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Vol. 20 Summer 1980 No. 2

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management international review

International Review for Management and Managerial Economics and Education

In recent years a great deal of attention has been paid to those branches of learning which may have something to say to managers. While the economist has long shared the confidence of management, particularly in Germany, Italy, and the Netherlands, and while business economics and industrial economics have grown to be subjects in their own right, an equal interest is now arising, particularly in the English-speaking countries, in those aspects of management concerned with its human forces — with sociology, psychology, and the behavior of organizations undergoing technological change. These are the domains of the so-called managerial sciences. The recognition of these as subjects in their own right is having profound effects upon the managerial outlook; in particular the development of formal and mathematical modes of thought — as in operations research — has thrown new light on the practical solution of many management problems. There is today a universal need to extend the use of these methods, but it is just as necessary that the mathematician know the practical needs of the manager as that the manager recognize the power of these new forms of analysis. What is to be desired throughout the field is an integrated outlook, calling for close collaboration between the scientists and the managers of all countries, and based upon sound bargaining between theory and practice.

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Accounting in the Golden Age of Greece

George J. Costouros

Contemporary accounting theory and practice have been shaped by diverse economic and political influences. The increasing social importance of the accounting profession is indicated in many ways. In the United States, recent legislative studies by both houses of the Congress (the Cohen and Moss Reports) have examined critically the adequacy of the accounting profession in the United States and its present structure to service adequately its several publics. In Great Britain, the problem of severe inflation and the perceived inadequacies of the existing accounting reporting theory and practice were extensively studied by the Royal Commission and its findings given in the Sandilands Report.

An understanding of the origins and subsequent development of accounting theory and practice should be of vital importance in our attempts to assess present deficiencies in accounting and to identify promising changes in accounting services to its constituencies in the future. An important part of this understanding can be obtained from thorough studies of the development of accounting in specific important historical periods.

The Center considers the exploration reported in *The Role of Accounting in the Economic Development of England 1500-1750,* by James O. Winjum, as a particularly useful study for the long-term evaluation of accounting development. We believe that Professor Costouros has added a concise and useful work to this larger continuing study of accounting development. He has examined basic goals and applications of accounting in one of history's pivotal periods. We believe this is a useful addition to the small but valuable work concerned with the international development of accounting thought.

The Pagatoric Theory of Financial Income Determination

Erich Kosiol

With this work the Center brings to a large part of the international reading public the first exposition of a unique and important theory of accounts. Professor Kosiol, a uniquely gifted individual with long experience in both the academic and professional worlds, has throughout his creative lifetime perfected his pagatoric theory of financial statements. This monograph is his statement of that theory.

Professor Kosiol had a unique opportunity to study with some of the leading accounting theorists during his student years and became particularly aware of the two rather diametrically opposed theories of financial statements and underlying accounting data. He evolved his own special comprehensive accounting theory structure. The reader will note that it is a thoroughly integrated theory which encompasses the wide variety of economic transactions which an enterprise may encounter. Professor Kosiol's pagatoric theory has been described by leading academicians as a unique logically integrated theory system and that it is the best known of such complete theory structures. Professor Kosiol's theory specifically includes the subjects of income determination as well as the theory of accounts, financial structures, and valuations theory. Professor Kosiol's productive life has had as a unique conceptual thread the continuing evolution and perfection of the pagatoric concept.

The Impact of Inflation on Accounting: A Global View

If one examines the long history of accounting, a focal point for continuing theory debate quite clearly has been in the area of valuation. More specifically, from accounting's very origins, the question of data in the accounts has been concerned with the original cost versus some other values. In modern times and for varying reasons given by many commentators, the question of recording values in the accounts has become more acute. In recognition of this growing debate which has a significant international impact, the Center planned a seminar with the theme, *The Impact of Inflation on Accounting: A Global View.*

In 1978 we were in a period of continued extensive debate concerning the impact of inflation on accounting data. This is not a new discussion but perhaps it has become more intense or viewed more seriously than earlier. The many cylical economic periods centuries ago in Great Britain and Europe had their impact upon accounting. The French company laws, the German balance sheet laws, and the English Company Acts are all manifestations of attempts to legislate appropriate action where accounting data faces the disorganization or stress caused by fluctuating market valuations. It seemed most appropriate to take a new perspective in 1978 of the international debate centering on the impact of inflation on accounting. We were pleased to have extraordinarily capable speakers to talk on this topic. Dr. Sprouse of the Financial Accounting Standards Board typified the type of scholar who gave presentations for a seminar of this type. Specific individual presentations in the seminar dealt with current concerns and current proposals in the inflation area.

We do not presume that the debate of whether accounting data should be adjusted or should reflect current market valuations has now been settled. We feel the problem is international in its importance and believe the pressures of inflation increase the pressure on accounting to attempt to provide a theory that will accommodate the specific reporting needs of a period of inflation. These pressures seem to vary directly with the rate of inflation. In the international area we have had a number of specific cases where countries have experienced inflationary rates of such magnitude that the original cost framework accounting data obviously had to be supplemented or adjusted.

We also attempted in the *Index on Inflation* to prepare a comprehensive bibliography on the inflation and accounting area of articles written during the past five years. We hope it will be useful to provide both specific reference to key works and also to indicate the pervasiveness of various themes within this overall area of debate.

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EDUCATION AND RESEARCH

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CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING OF THE COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

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V. K. Zimmerman, *Director*

THE INTERNATIONAL JOURNAL OF ACCOUNTING

EDUCATION AND RESEARCH

Volume 16 · Number 1 · Fall 1980

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The International Journal of Accounting *Education and Research* is published semi-annually, spring and fall, by the Center for International Education and Research in Accounting, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign. Subscription rates are $10.00 per year. Single-copy price is $5.00. Copies of prior issues are still available.

Manuscripts and communications for the editor and business correspondence should be addressed to **The International Journal of Accounting** *Education and Research,* 320 Commerce Building (West), University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

V. K. Zimmerman, *Editor*
JaNoel S. Lowe, *Assistant Editor*

Contents

A Note from the Editor

As in the case of some earlier issues of the *Journal,* this issue provides the complete record of the proceedings of an international seminar on accounting. This seminar, focussing on the current practical and theoretical problems in international accounting, was held in Urbana, Illinois, on April 10-12, 1980. The edited copies of the papers presented at the seminar are included. We are indebted to Ms. JaNoel Lowe for her assistance with the technical editing and processing of the manuscripts.

A review of the scope and nature of the seminar papers is revealing. Although no startling new theoretical or practical problems are revealed, significant new areas of emphasis in international accounting are evident. The refinement of international accounting practice is apparent. The slow but necessary international articulation of accounting practices and reports is also revealed. Complex environmental factors exist when accounting activities cross national political boundaries. These papers recognize the managerial and reporting problems that now exist in international accounting. The special legal, social, and political characteristics of the multinational corporation are clearly present and in need of some logical and coherent accounting responses.

Accounting for international economic events in the existing international structure of relatively inflexible legal regulations presents a special problem to the international accountant. The international setting continues to change. Thus, the efforts of international accountants to achieve a harmonization of accounting theory and practice occur in a changing and dynamic setting, and agreements on new international standards are transient achievements at best.

The papers of this seminar provide some new insights of appropriate responses to our present international accounting managerial and reporting needs. Our common awareness of these problems is increasing, and we hope that our ability as accountants to respond to a dynamic global environment is also increasing.

V. K. Zimmerman

The International Accounting Standards Committee—Recent Developments and Current Problems

DONALD J. HAYES*

The International Accounting Standards Committee (IASC) was founded seven years ago by the national accountancy bodies of Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ireland, and the United States. Since that date, the IASC has issued thirteen accounting standards and has commenced the process for the issuance of a number of others. Its membership has increased so that it now represents more than 400,000 accountants in forty-six countries. Hundreds of those accountants have been directly involved in the IASC process through task forces and the board itself and thousands of others through the comment letter process. By any reasonable measure of success, the IASC efforts to date have been highly successful. But the author would be quick to recognize that success, like beauty, exists primarily in the eye of the beholder and there are other evaluators who might express reservations on the appraisal of IASC's success. They might even disagree.

NEED FOR INTERNATIONAL ACCOUNTING STANDARDS

In evaluating the work of the IASC, the evaluator must first reach conclusions as to how much can and should be accomplished with regard

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to the setting of international accounting standards. The author has identified at least three schools of thought on this point.

In school number 1 are those who believe that international accounting standards represent a critical need that should be fulfilled by the establishment of a supreme rule-making body for issuance of uniform and inflexible standards to be applied in the identical manner by accountants throughout the world. In my view, development of such standards would require a tremendous expenditure of time and money in order to deal effectively and specifically with the great diversity of circumstances throughout the world, and even then, they might not be accepted. Certainly, IASC, as a part-time committee meeting ten to twelve days a year and operating with an annual budget of approximately $300,000, would have to be substantially reinforced for that kind of assignment. To put the IASC budget in perspective, it may be noted that the full-time Financial Accounting Standards Board (FASB) effort in the United States involves a cost of approximately $6 million annually. The author views supporters of this school as politically naive.

In school number 2 are those who believe that circumstances throughout the world are too diverse, that therefore useful international accounting standards of any sort are unachievable and that we should not waste our time trying to develop them. Members of this school of thought would emphasize the need for additional disclosure in financial statements to enable users of the statements to reconcile differences between the foreign and local standards as they see fit. The author views supporters of this school as defeatists and believes plans for reconciling disclosures are unworkable in practice and merely promote confusion.

In school number 3 are those, including the author, who fall between the first two schools of thought. This group agrees that the world is too complex for us to reasonably expect that rigid, inflexible standards can be developed for each issue in the current generation, or for that matter, the next. But they believe that worldwide understanding of financial statements would be improved by the elimination of obvious bad accounting practices and by the development of certain basic international standards to discourage unjustifiable differences in practices. This group would accept some flexibility in standards as a necessary price of progress and in recognition of the difficulty of accommodating the diversity of worldwide circumstances. They would also provide for disclosure requirements — but not complete reconciliations — to miti-

gate the impact of permitting some flexibility. The author views supporters of this school as realists.

"Into which school do most IASC members fall?" you may ask. While not speaking for the IASC on this matter, the author believes that most IASC members adopt the mid-course, or the "realist" point of view. They believe that instant uniformity is often not practical and that progress in international accounting standard setting must be viewed with a long-range perspective rather than with a view toward immediate spectacular results. And they believe the present IASC effort is quite worthwhile when assessed realistically against a very complex worldwide environment. It is against this background that this paper discusses some of the problems facing the IASC, how the author believes IASC should react to them, and some of its recent accomplishments.

PROBLEMS FACING IASC

One problem has been recognition and acceptance of IASC standards. It has been far less than ideal and therefore a problem. The degree to which IASC standards have been incorporated into the national standards of the various member bodies of IASC has varied. While the member bodies have agreed to use their best endeavors to comply with IASC standards or to see to it that there is disclosure of non-compliance, success in these endeavors has varied. Early international accounting standards covered areas that, while often complex, did not have to overcome significant international disagreement on basic measurement principles. For example, International Accounting Standard (IAS) No. 1 called for enterprises to disclose their accounting policies. However, recent international accounting standards cover more controversial areas, and the IASC has found it increasingly difficult to achieve agreement on a single basic principle. As a result, it has allowed limited alternative accounting methods for the same transaction supplemented by a requirement for disclosure of the relevant facts including the method used. While this flexibility has facilitated adoption of the standards on an international basis, it has also caused some observers to question whether the IASC is properly fulfilling its role. But there are a number of underlying circumstances that must be considered in assessing how to resolve this problem.

First is that it is difficult for the IASC to synchronize its efforts with those of individual member countries. Different countries have different priorities with regard to the issues involving accounting

standards that they believe need to be resolved, with the result that while one country gives top priority to one issue, another gives it to a different one. As a result, the IASC often finds itself dealing with issues that one country has resolved just recently but about which another has not yet initiated a study. In these circumstances, it can be expected that the implementation of particular IASC standards in various countries will require a period of time before the local accounting standard-setting body has the opportunity to initiate an effort to implement a comparable local standard. Acceptance can not be expected to occur overnight.

A second circumstance that must also be recognized is that the IASC will not necessarily be dealing with particular standards in the same depth as the accounting standard-setting bodies of certain advanced countries. This is because of the IASC's desire to keep the standards relatively simple and understandable throughout the world. But at the same time, the accounting professions in developing countries are still in the early stages of setting accounting standards on basic matters, and they are years away from dealing with complex subjects such as lease accounting or inflation accounting that are now before the IASC. In summary, the IASC cannot lead the way for the most advanced professions without creating acceptance complications for the less advanced professions.

A third circumstance affecting acceptance relates to the fact that the IASC is comprised only of professional accountancy bodies and the board of the IASC, which issues the standards, is comprised primarily of the accountancy organizations from developed countries. This situation exists, quite simply, because the accountancy bodies were the first to recognize the need for standards and to take some constructive action and because the professions from the developed industrialized countries had the most experience and resources to contribute to the process. There certainly has been no plan on the part of the IASC to exclude any parties or countries from the process who have a legitimate interest in international accounting standards and are willing to contribute to the process. But it would be almost impossible for IASC to function if it were expanded to include representatives from every country and faction.

With all of these complicated circumstances, it is quite unrealistic to expect that the separate national accounting standard-setting bodies throughout the world will be marching in perfect cadence with IASC standards. Recognition and acceptance must be assessed in realistic terms, and it will take time.

A second problem has been asserted to be a lack of identification of objectives of financial statements, or the broad theoretical underpinnings of accounting. Some critics view the IASC failure to identify and define the worldwide objectives of financial statements as a major failing that impedes progress. Who are financial statements intended to serve? In the United States, the investor and creditor are viewed as the primary audience for financial statements. Other countries give significant weight to the needs of labor unions, employees, government planners, and taxing authorities. Some countries, particularly developing countries, perceive the need for economic data for macroeconomic planning and social purposes as a major factor that should influence the thrust of accounting standards. Generally speaking, the IASC has been attempting to harmonize existing national standards — which presumably have been developed with some objectives in mind — rather than to develop totally new standards as if starting from a clean slate. So at this stage, failure to more specifically identify objectives of financial statements has not been a major obstacle to progress. Nevertheless, there is no doubt that perceptions of different objectives of financial statements by different countries have forced the IASC to accept some flexibility in its standards that might not be required if objectives were better defined.

A third problem has been intervention by international governmental bodies. It is complicating an already complicated situation. One such body is the United Nations. A few years ago, the UN commissioned a study which led to a much-discussed report, "International Standards of Accounting and Reporting for Transnational Corporations." The report advocated that extensive disclosures be made by both multinational and national companies, involving not only financial accounting areas, but also "social matters" — for example, a description of the enterprise's labor relations policy and a description of completed environmental protection measures. Critics of the report expressed concern that perhaps only multinationals would be required to comply with these extensive disclosures, and if so, the multinationals would be put at a competitive disadvantage relative to national companies. Critics also said there was not a country in the world that requires all of the recommended disclosures, and the cost of reporting the information would exceed benefits to be derived from it.

In response, the UN has established a new group to review the first report and to prepare a new one. At the group's first meeting last February, Klaus Sahlgren, executive director of the UN Centre on

Transnational Corporations, reiterated that "the United Nations is committed to the long-term objective of establishing an international comparable system of standardized accounting and reporting." The membership of this new group consists of representatives from thirty-four countries: nine from Africa, seven from Asia, six from Latin America, three from eastern Europe, and nine from western Europe and "other states." It is interesting to note that the two countries with the most extensive accounting disclosure in the world — Canada and the United States — are included in "other states." The new group has agreed to consult with the IASC but may not adopt the IASC standards as a framework for their own recommendations. Underlying the UN's interest in accounting and reporting standards is its comprehensive information system, which, while in the initial phase at the moment, will include a detailed, computerized financial data bank on multinational companies.

IASC representatives, including the author, attended the most recent meeting of the new group, and the IASC expects to have a continuing liaison with it. A central thrust of the UN efforts is to help developing countries, particularly in their dealings with transnational corporations. Improving disclosures of segmented results, related party transactions, and socially significant information have been emphasized. But no definitive standards have yet resulted from this effort.

Another governmental body involved is the Organization of Economic Cooperation and Development (OECD). In 1976, the OECD issued "Guidelines for Multinational Enterprises," calling for, among other things, the voluntary disclosure by multinationals of their operating results and sales by geographical area, and the policies they use relative to intragroup pricing. These guidelines have been publicly supported by the United States government and by the International Chamber of Commerce. At least one country, Australia, has indicated that it desires foreign companies operating in Australia to observe the guidelines, and it uses them as a point of reference when viewing applications by foreign companies for investments in Australia. Trade unions in Europe have also cited the OECD guidelines in disputes with management.

To assess how compliance with the voluntary guidelines was proceeding and to review international accounting matters in general, in early 1979 the OECD established an ad hoc working group on accounting standards. In its recently completed report, the group reported that it had found certain weaknesses in the guidelines — speci-

fically, in the lack of standards for measuring the items to be disclosed. For example, the guidelines call for disclosure of research and development expenditures, yet they do not define "research and development." The group stated that without measurement standards, there cannot be international uniformity of reporting. The report took note of the work of the IASC but stated that the IASC, being a private, narrowly constituted body, could not be asked to prepare the measurement standards to support the OECD guidelines. The OECD also has failed to produce a single definitive accounting standard.

Finally, the European Economic Community (EEC) is also substantially involved in accounting standards setting. On July 24, 1978, the EEC published its Fourth Directive on Company Law, which will generally be effective in 1981 (each member country has some latitude in determining an effective date). This directive deals with the annual preparation of financial statements by corporations operating in EEC member countries. Its purpose is to harmonize the content and presentation of financial statements issued by these corporations. It also requires conformity of certain principles of accounting, such as those dealing with goodwill, research and development, and investments. The directive calls for all enterprises subject to its requirements to prepare their balance-sheet and income statements in accordance with the very specific format described in the directive. Both the financial statement presentation and accounting principles requirements differ in certain respects from practice in many other countries in the world, including Canada and the United States.

The EEC has also issued for discussion a draft of a seventh directive covering consolidated financial statements. This directive would require enterprises operating in the EEC but headquartered elsewhere to prepare financial statements which consolidate all of their subsidiaries located in or controlled from EEC countries. The accounting policies used to prepare these financial statements would have to be consistent for each company in the consolidation, and furthermore would have to be generally accepted in one of the countries involved. For example, a U.S. multinational with subsidiaries in Belgium, England, and France would be required to publish combined financial statements for these subsidiaries using principles of accounting generally accepted in either Belgium, England, or France. If the three subsidiaries had controlling investments in companies outside the EEC, these would have to be included, presumably on either the consolidation or equity basis, depending upon the degree of control.

These directives, and others to come, will likely have a major impact on multinational companies with significant operations in the EEC member countries. The IASC has been generally able to accommodate to the EEC standards, but this may not always be the case.

HOW IASC SHOULD REACT

As a result of these three problems, the author believes that the IASC must take a number of steps:

1. It must broaden its organization to provide for greater involvement in its activities by auditors, preparers, and users of financial statements in all sections of the world.
2. It must increase its efforts to enlist the support of other organizations interested in accounting standards such as the UN, EEC, OECD, stock exchanges, and business organizations in order to gain greater acceptance of its pronouncements.
3. It must further investigate the reasons for nonacceptance of its standards and initiate education and other types of programs to gain acceptance.
4. It must promote discussions among major national accounting standard-setting bodies to deter major countries from going in different directions on such subjects as deferred taxes, foreign-currency translation, and inflation accounting.
5. It must undertake preliminary work to explore objectives of financial statements from a worldwide viewpoint so that a better foundation is established for a second-phase effort to further narrow alternative accounting methods.

ACCOUNTING ISSUES FACING IASC

The author is pleased to report that the IASC is actively pursuing most of these matters. At the same time, it is also dealing with a heavy agenda of accounting issues including proposed standards on the following subjects:

1. Supplementary disclosures of the effects of changing prices. This proposed standard provides for supplemental disclosure of income information adjusted to reflect the impact of either general price-level changes or specific price-level changes.
2. Accounting for property, plant, and equipment. This proposed standard would, among other things, define the circumstances under which expenditures relating to plant and equipment should be capitalized.

3. Accounting standards on revenue recognition. This proposed standard would define the conditions that should be met in order for revenue to be recognized. It would include an appendix illustrating how the standard would apply to a variety of types of transactions.
4. Accounting standards on accounting for government grants. This proposed standard would specify the accounting for government grants, with particular emphasis on the basis for reflecting such grants in income.
5. Disclosures in financial statements of banks. This is a discussion paper intended to solicit views on some recommended bank disclosures, most of which are consistent with those presently required by the Securities and Exchange Commission in the United States.
6. Accounting for retirement benefits in the financial statements of employers. This proposed standard calls for the current accrual of retirement benefits. Such accruals would be based on accepted actuarial methods and would include provision for amortization of past service cost over the service lives of active employees.
7. Reporting of financial information by segment. This proposed standard provides for disclosure of income information by industry group and geographic areas.
8. Accounting for business combinations. This subject is in the early stages of discussion. The IASC will attempt to specify the circumstances under which purchase accounting, pooling of interests accounting, and new entity accounting would apply and the related requirements to implement each method.
9. Accounting for interest costs. This subject is in the early stages of discussion. The IASC will attempt to specify the circumstances, if any, under which interest should be capitalized.
10. Accounting for leases. This proposed standard provides for the capitalization of finance leases by both lessees and lessors. It is similar in most respects to FASB Standard No. 13.
11. Accounting for foreign-currency translation. Work on this proposed standard was suspended pending resolution of the current review of FASB Standard No. 8 in the United States. Should the U.S. standard move in the direction that was recently announced by the FASB, development of an international standard on a basis that will harmonize practice should be attainable.

FUTURE PROSPECTS

When the IASC has completed these topics, it will have covered most

of the areas of accounting dealt with in professional literature in the United States. However, this author does not visualize that reaching that point will be the end of the IASC process but rather only the end of the beginning. A sound foundation will have been established for a second-phase effort to continue to narrow alternative practices.

This year and the next will be a challenging period for IASC. It will need the continued support of accountants in public practice, in industry, and in academe if it is to be successful in this period and in the long run. The views of academicians will be particularly welcome. As one philosopher stated, "To be receptive to criticism means to erase half of every deficiency and fault." IASC does not claim to be free from fault. It is responding to changing times and circumstances to maintain its leadership role. With help and suggestions from all parties interested in international accounting issues, IASC should be able to meet the new challenges just described. Indeed, it must if international accounting standards are to continue moving forward.

The Measurement of Corporate Profitability on a Cash-flow Basis

G. H. LAWSON*

INTRODUCTION

This paper has theoretical, analytical, and empirical content. The theory and analysis are largely to be found in the first five sections while the empiricism is reported in the remaining three.

The theory and analysis outlined here attempt to specify a comprehensive multiperiod accounting model which integrates financial performance from a corporate perspective with performance from a stockholder or stock market standpoint. It seems reasonable to suppose that there should be a consistency between performance in these two senses; indeed, in the author's opinion, the one is the mirror image of the other. The analysis also includes the derivation of cash-flow statements from published accounting data and therefore describes the manner in which the aggregate and individual company cash flows reported here were ascertained.

One of the most fundamental aims of the analysis is the derivation of a rigorous method of ascertaining effective rates of tax on the corporate sector or effective rates of tax on corporate investment, which amounts to the same thing. The effective rates reported here suggest

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Financial support from the Social Science Research Council, the Esmée Fairbairn Charitable Trust and the Association of Certified Accountants for the research reported in this paper is gratefully acknowledged. The author is also grateful to Keith Thompson and Kian Chin for their contributions to the empirical analysis.

that post-war U.K. fiscal policy has been a very severe deterrent to corporate investment.

A further important conclusion which emerges from the empiricism is that, in basing dividend policies on historic cost profits, U.K. companies have generally paid uncovered dividends, thus substituting debt for equity which, in turn, has contributed to a decline in equity market values.

A compelling aspect of cash-flow accounting, which also emerges in this paper, concerns the extent to which cash-flow results deviate from those yielded by other accounting models. By and large, cash-flow variables take on much lower values than their historic cost, current cost accounting (CCA), and replacement counterparts. The interpretation of cash-flow performance must therefore be seen as an integral part of both ex post and ex ante performance measurement.

CASH-FLOW STATEMENTS EXPRESSED IN MONEY TERMS

A total cash-flow statement for any year j can be expressed as:

$$(k_j - h_j) \pm B_j \pm N_j \pm M_j \equiv (A_j + R_j - Y_j) + F_j + t_j + D_j \pm H_j \qquad (1)$$

that is,

total cash inflows $\equiv$ total cash outflows (including liquidity change) where, in year j,

$k_j - h_j$	stands for operating cash flow, that is, cash, k_j, collected from customers *minus* cash, h_j, paid to suppliers of all goods and services other than capital goods;
B_j	is new capital received (+) from equity shareholders or repaid (−) thereto;
N_j	is new medium- or long-term loans raised (+) or repaid (−);
M_j	is the increase (+) or decrease (−) in bank overdrafts and/or short-term loans;
$A_j + R_j - Y_j$	represents net cash outlays on capital investment comprising replacements, A_j, growth investment, R_j, and displacements, Y_j;
F_j	represents interest payments;
t_j	is the corporate tax payment;
D_j	is the dividend paid to shareholders; and,
H_j	represents the increase (+) or decrease (−) in liquidity.

Any cash-flow concept of periodic earnings must evidently be wholly, or partially, represented by some variant of the basic cash-flow identity represented by (1). For example,

$$(k_j - h_j) - (A_j + R_j - Y_j) - t_j \mp H_j \equiv (F_j \mp N_j \mp M_j) + (D_j \mp B_j) \quad (2)$$

that is,

$$\begin{array}{l} \text{operating} \\ \text{cash} \\ \text{flow} \end{array} - \begin{array}{l} \text{net} \\ \text{capital} \\ \text{investment} \end{array} - \begin{array}{l} \text{tax} \\ \text{payments} \end{array} \mp \begin{array}{l} \text{liquidity} \\ \text{change} \end{array} \equiv \begin{array}{l} \text{lenders'} \\ \text{cash} \\ \text{flows} \end{array} + \begin{array}{l} \text{shareholders'} \\ \text{cash} \\ \text{flows} \end{array}$$

or,

$$\begin{array}{l} \text{periodic post-tax entity earnings}^{1} \text{ adjusted} \\ \text{for periodic liquidity change} \end{array} \equiv \text{total distributions.}$$

Alternatively, and by analogy with the equity basis of accounting,

$$(k_j - h_j) - (A_j + R_j - Y_j) - F_j - t_j \equiv (D_j \mp B_j) \mp N_j \mp M_j \pm H_j \quad (3)$$

that is,

$$\begin{array}{l} \text{periodic post-tax equity} \\ \text{(cash-flow) earnings} \end{array} = \begin{array}{l} \text{periodic equity cash flows plus debt} \\ \text{financing and periodic liquidity change.} \end{array}$$

However, if, reflecting transactions and precautionary motives, liquidity levels (and therefore periodic liquidity changes, $\mp H_j$) are an active decision variable, post-tax periodic equity cash-flow earnings are defined by the left-hand side (LHS) of the identity

$$(k_j - h_j) - (A_j + R_j - Y_j) - F_j - t_j \mp H_j \equiv (D_j \mp B_j) \mp (N_j \mp M_j) \quad (4)$$

that is,

$$\begin{array}{l} \text{periodic post-tax equity earnings} \\ \text{adjusted for periodic liquidity change} \end{array} \equiv \begin{array}{l} \text{periodic} \\ \text{shareholder} \\ \text{cash flows} \end{array} \mp \begin{array}{l} \text{periodic} \\ \text{external debt} \\ \text{transactions.} \end{array}$$

If periodic shareholder cash flows, $D_j \mp B_j$, exceed the LHS of (4), shareholder cash flows may be financed with externally raised debt.

[1] Periodic pretax entity earnings can obviously take on positive or negative values depending upon the sizes (and signs) of the operating cash flow, $k_j + h_j$, and net investment, $A_j + R_j - Y_j$.

Should there be real debt-equity substitution[2] every year, share prices will sooner or later go into a state of long-term real decline. Obvious though the logic of this statement is, its implications generally seem, for reasons explained below,[3] to have escaped U.K. company directorates throughout the last two or three decades.

For completeness, periodic equity cash flows, $D_j \mp B_j$, that is, dividends minus (or plus) equity capital raised (or repaid) may be defined as:

$$D_j \mp B_j \equiv (k_j - h_j) - (A_j + R_j - Y_j) - F_j - t_j \mp H_j \pm N_j \pm M_j. \tag{5}$$

Identity (5) clarifies the structure of the expectations that are allegedly formed by investors in the determination of share prices. That is to say, in attempting to quantify their future equity cash-flow stream, investors estimate each of the ex ante determinants shown on the right-hand side (RHS) of (5).

It may also be hypothesized that in forming expectations about a company's ex ante cash flows, the market will uncover a company's past and current underlying cash-flow generating capacity and utilize such ex post data accordingly.

DERIVATION OF CASH-FLOW STATEMENTS FROM U.K. PUBLISHED ACCOUNTS

The historic cost measure of (published) periodic profit, HCP_j, is given by:

$$HCP_j \equiv d_j - (a_{j-1} + b_j - a_j) - L_j - F_j + (Y_j - X_j) - t_{j+1} - t_j^* \tag{6}$$

d_j	stands for accrued sales;
$a_{j-1} + b_j - a_j$	represents the cost of sales, that is, opening inventory, a_{j-1}, *plus* total accrued revenue expenditure, b_j, (other than interest) *minus* closing inventory, a_j, which, like the opening inventory, is measured on a FIFO basis;
L_j	is total depreciation based on historic cost;
F_j	is accrued interest (for simplicity, interest paid and accrued are assumed to be synonymous);
$Y_j - X_j$	represents the proceeds, Y_j, of assets displaced minus the written down book value, X_j, thereof;
t_{j+1}	is the current year's tax charge which, in the United Kingdom, is paid roughly one year in arrears; and,

[2] See p. 15 and following.
[3] See p. 15 and following.

t_j^*	is a transfer to a tax equalization (or deferred taxation) account.

Deducting the LHS of (3) from the RHS of (6) yields the difference between periodic post-tax equity (cash-flow) earnings and post-tax historic cost profit, namely,

$$\begin{aligned}(6) - (3) \equiv {} & (d_j - k_j) + (a_j - a_{j-1}) - (b_j - h_j) \\ & + (A_j + R_j - L_j - X_j) - (t_{j+1} + t_j^* - t_j)\end{aligned} \tag{7}$$

that is,

≡	periodic change in receivables	+	periodic change in inventory values	−	periodic change in payables	+	periodic depreciation shortfall	+ periodic change in current and deferred tax liabilities

or,

$$\equiv \quad p_j \quad + (A_j + R_j - L_j - X_j) \quad - (t_{j+1} + t_j^* - t_j)$$

that is,

≡	periodic working capital investment[4]	+ periodic depreciation shortfall[5]	periodic change in taxes payable

A comparison of beginning and end-period balance sheets reveals each of the constituents of periodic working capital, p_j, the periodic change, $t_{j+1} + t_j^* - t_j$, in current and deferred tax liabilities, the financing transactions, $\pm B_j \pm N_j \pm M_j$, and the liquidity change, H_j. Net periodic investment, $A_j + R_j - Y_j$, can also be directly deduced from U.K. published accounts. Hence, the conversion of historic cost profit (before depreciation, interest, and taxes), namely, $d_j - (a_{j-1} + b_j - a_j)$, to operating cash flow, $k_j - h_j$, and the derivation of the other items needed to complete a periodic total cash-flow statement, is purely a matter of arithmetic. Thus,

[4] In general, it can be said that, given the periods of trade credit allowed and received and the rate of profit, periodic working capital will be higher the higher are the periodic increases in sales volume, output, physical inventories, selling prices, and costs. See G. H. Lawson and A. W. Stark, "The Concept of Profit for Fund Raising," *Accounting and Business Research* (1975).

[5] An historic cost periodic shortfall will generally be greater the higher the amount of growth investment, R_j, the faster the (money) rate of increase in the prices of assets acquired and the longer the period over which assets are depreciated.

$$d_j - (a_{j-1} + b_j - a_j) - p_j = k_j - h_j. \tag{8}$$

The tax provision, $t_{j+1} + t_j^*$, is converted into the year j tax payment, t_j, in like manner. That is to say,

$$\underset{\text{paid}}{\overset{\text{tax}}{t_j}} = \underset{\text{provided}}{\overset{\text{tax}}{(t_{j+1} + t_j^*)}} - \underset{\text{deferred tax liabilities}}{\overset{\text{change in current and}}{(t_{j+1} + t_j^* - t_j)}}.$$

In short, identities (1), (2), (3), (4), and (5), and their constituent parts, are readily derived from published accounting statements. Thus, to the extent that conventional accounting data are known or inferable, so too are their cash-flow adjuncts.

CASH-FLOW STATEMENTS EXPRESSED AT A BASE-YEAR PRICE LEVEL

In any period j, each of the cash-flow identities illustrated above is expressed in terms of period j purchasing power. However, since the purchasing power of money changes over time, the cash-flow identities of period j are not directly comparable with those of periods $j + 1$, $j + 2, \ldots$. To facilitate an interperiod comparison, a sequence of cash-flow statements expressed in money terms must be re-expressed at a base-year price level by resorting to indices measuring the change in the value of money.

Let the levels of the index measuring the general level of prices be $I_1, I_2, \ldots, I_n$, on the average due dates of years $1, 2, \ldots, n$. Thus, to re-express the cash-flow identities of year 1 at midyear n prices, they are multiplied by I_n/I_1. Similarly, to express the cash-flow identities of years $2, 3, \ldots, n - 1$, in terms of midyear n prices, the respective annual identities are multiplied by $I_n/I_2, I_n/I_3, \ldots, I_n/I_{n-1}$.

Proceeding from the proposition that periodic cash-flow statements constitute a summary of financial transactions, all of which are expressed in the same purchasing power, conceptually speaking, a periodic cash-flow statement automatically achieves the adjustments to historic cost income statements that result in current cost income measures. Hence, in that a sequence of cash-flow statements expressed at a base-year price level copes both with relative price changes and changes in the value of money, those statements satisfy most, though not all, of the desiderata of a rigorous multiperiod inflation accounting model. The interpretations afforded by such a model constitute the substance of this paper. However, to complete the model's specifica-

tion, four further technicalities must be taken into account. These are the (cash-flow accounting) treatment of:

1. The unexhausted benefits of capital expenditure alias the capital stock valuation problem;
2. The impact of inflation on the real cost of debt;
3. The calculation of effective tax rates; and
4. The computation of effective interest cover.

THE UNEXHAUSTED BENEFITS OF CAPITAL EXPENDITURE

The treatment of capital expenditure in cash-flow accounting, namely its inclusion as a cost in the period in which it is incurred, cannot be too strongly emphasized. [See identities (2), (3) and (4).] While conceding that this treatment gives full effect to asset acquisition costs in terms of the purchasing power of the period in which such costs are incurred, accountants usually reject "immediate write-off" on the grounds that it ignores the unexpired benefits of capital outlays. But their own prescription — allocating capital expenditure over the succession of periods which enjoys its use — is wholly objectionable. Such allocations are inevitably arbitrary and result in asset written down values (representing the unexpired benefits) which are equally arbitrary. Written down values do not represent observable real world values and are in no way relevant to the returns which can be enjoyed by the shareholders and other financiers of a going concern.

The genuine unexpired benefits of maintaining an asset in use can never be more than expectations. Expectations do, however, have a value and will be impounded in the market value of a company's shares and/or its other financial instruments accordingly. Hence, capital expenditure should be treated as a cost in the period in which it is incurred and, at the end of the sequence of periods, the (multiperiod) performance of which is to be measured, the market value of a company's shares and loans should in effect be entered as a credit. Similarly, the market value of shares and loans should be entered on the debit side at the beginning of the sequence since, whatever happens thereafter, those values represent the cost of acquiring total ownership at the outset.[6] Using these "entry" and "exit" market prices

[6] As a little reflection will suggest, this is the only method which can give exact effect to the serial dependence between total investment and subsequent years' operating cash flows in the measurement of multiperiod ex post financial performance.

in conjunction with identity (4), the respective n-period ex post returns to shareholders, lenders, and to an entity as a whole, can be expressed in terms of the familiar internal rates of return defined by equations (9), (10), and (11).[7]

$$V_o^{(e)} = \sum_{j=1}^{n} \frac{D_j \pm B_j}{(1+r_e)^j} + \frac{V_n^{(e)}}{(1+r_e)^n}. \tag{9}$$

$$V_o^{(d)} = \sum_{j=1}^{n} \frac{F_j \pm N_j \pm M_j}{(1+r_d)^j} + \frac{V_n^{(d)}}{(1+r_d)^n}. \tag{10}$$

$$\begin{aligned} V_o^{(e)} + V_o^{(d)} &= \sum_{j=1}^{n} \frac{(D_j \pm B_j) + (F_j \pm N_j \pm M_j)}{(1+r)^j} + \frac{V_n^{(e)} + V_n^{(d)}}{(1+r)^n} \\ &= \sum_{j=1}^{n} \frac{(k_j - h_j) - (A_j + R_j - Y_j) - t_j \mp H_j}{(1+r)^j} \\ &\quad + \frac{V_n^{(e)} + V_n^{(d)}}{(1+r)^n} \end{aligned} \tag{11}$$

where,

$V_o^{(e)}$, $V_o^{(d)}$ and $V_n^{(e)}$, $V_n^{(d)}$ represent the end-year o and end-year n market values of a company's equity and debt, respectively; and r_e, r_d and r are the respective equity, debt, and entity rates of return over the n-year period in question.

Although equations (9) and (10) are universally accepted methods of defining the returns that are enjoyed by shareholders and lenders respectively, their lack of affinity with the historic cost, and indeed most other accounting models, is not as widely appreciated. In elaborating this contention, the following propositions are apposite:

1. The ex post equity rate of return computation utilizes the stream of dividends (adjusted for capital contributions and repayments) and *not* a sequence of periodic equity cash-flow earnings defined by the LHS of equation (3).[8] Similarly, given the entry and exit prices of debt, the debt flows, $F_j \pm N_j \pm M_j$, constitute the basis of the ex post debt interest rate.

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[7] The incorporation of entry and exit market prices into measures of multiperiod performance expressed in absolute terms is discussed in G. H. Lawson, "Company Profitability and the U.K. Stock Market — An Exercise in Cash Flow Accounting," Research Report (Manchester Business School, March 1979).

[8] A situation such that shareholder cash flows, $D_j \mp B_j$, are always equal to periodic equity cash-flow earnings as defined by the LHS of (4) can be regarded as an exceptional case. In particular, it requires $N_j + M_j$ always to take on a value of zero in which event interest, F_j, can only be positive if the company originally raised irredeemable debt. Alternatively, periodic equity cash-flow earnings will be equal to periodic cash flows only so long as a company is wholly equity financed.

2. The ex post entity rate of return, r, is by definition the weighted average of the debt and equity rates of return. However, unlike the equity and debt rate of return calculations, the numerators of the successive terms of equation (11) (excluding entry and exit values) simultaneously represent periodic entity cash-flow earnings and periodic proprietorship consumption (and/or external reinvestment by the collective entity proprietorship itself).

From an economic standpoint, it therefore seems reasonable to contend that performance should be measured at the entity level and that deviations between equity earnings and equity cash flows merely reflect variations in the division of periodic entity cash-flow earnings as between lenders and shareholders. This reasoning is symmetrical in that it clearly does not preclude situations in which negative entity cash-flow earnings [LHS of (2)] are financed by further capital from both lenders and shareholders.

Returning more specifically to the unexhausted benefits of capital expenditure: the LHS of (4) provides the clearest indication of the reason the unexpired benefits of capital expenditure in any individual year simply cannot be neglected. Thus, the magnitude of net capital expenditure, $A_j + R_j - Y_j$, may, for perfectly good reasons, swamp the operating cash flow, $k_j - h_j$, not to mention the likely additional outlays in respect of interest, taxes, and liquidity. If investment decisions are economically well based, their present values will sooner or later be reflected in share values. (In fact, the latter offer the only direct means of shareholder access to the unexhausted benefits of capital expenditure incurred by a going concern.) Hence, to the extent that entity cash-flow earnings are depressed in an individual year because of heavy capital expenditure, the company's total market value should generally embody a countervailing offset. This offset is in theory equal to the actual (end-year) total market value of the company minus the total market value that would have emerged had some part of $A_j + R_j - Y_j$ been distributed as dividends.[9] In other words, the analysis of a company's periodic cash flows and the tracking of its total market value are integral components of the overall process of ex post financial performance appraisal.

[9] By the same token, it can be argued that periodic increases in liquidity which smack of excessive caution will depress periodic entity cash-flow earnings but simultaneously raise a company's total market value above that which would have emerged at some lower level of liquidity. Likewise, heavy payments, h_j, to suppliers in respect of inventory investment will depress periodic operating cash flow but enhance stock market values.

One should, of course, countenance the possibility that capital, inventory, and liquidity investments are neither promptly nor fully impounded in share prices in the manner postulated above. But that in no way negates the contention that periodic entity performance is measured by two indices, namely, periodic entity cash-flow earnings and market value performance. If market performance is not perceived to be commensurate with internal investment policies, investors can draw the appropriate conclusion. One of the pre-eminent modern functions of accounting is the disclosure of information which will help investors to sharpen their perceptions in this respect.

THE IMPACT OF INFLATION ON THE REAL COST OF DEBT

If financial performance is measured on an entity basis, the real cost of debt is irrelevant. In measuring the division of entity (cash-flow) earnings between shareholders, the real cost of debt is a pertinent question.[10]

Contrary to widespread supposition, it is not axiomatic that inflation always provides shareholders with gains at the expense of lenders. Such "money gains" actually realized in the form of consumable shareholder income stem from a failure by lenders to anticipate fully future inflation when subscribing for new debt issues. This failure results in a sequence of contractually defined interest receipts (specified in money terms) which do not fully compensate for the totality of market risk and inflation actually borne. But the resultant money gains (if any) to shareholders from debt financing are automatically captured by a conjunction of the income statement and closing share price.

Any ex post periodic benefit to shareholders attributable to debt financing can only be reflected in an actual interest payment which is lower than the interest that would have been paid had the actual interest rate been inflation indexed. On the other hand, at the end of an accounting period, any shareholder benefits ascribable to outstanding debt are no more than expectations. But if, like the benefits of unexpired capital expenditure, such expectations have a value, they will be impounded in the market price of a company's equity shares.[11]

[10] It has also emerged as a major unresolved problem in recent U.K. developments in current cost accounting.

[11] Such unexpired benefits of outstanding debt as are impounded in quoted equity prices may alternatively be regarded as the capitalized value of an incremental sequence of future interest payments that represents the difference between future interest payable and that which would be paid were lenders able accurately to embody future inflation in interest rates. These benefits can obviously take on either positive or negative values.

Based on this reasoning, the unexpired benefits of outstanding debt represent unexpired losses from a lender's standpoint and, in efficient markets, may be assumed to be impounded to an equal and opposite extent in the market value of debt. For completeness, it may be added that revisions to anticipations of future inflation may be expected to trigger equal and opposite adjustments in the market values of debt and equity.

If efficient market assumptions do not hold, it cannot be assumed that the unexpired benefits (losses) of debt financing are fully impounded in the respective market values of debt and equity. If not, any shareholder benefits attributable to debt financing can only be enjoyed from period to period as interest is actually paid. In these circumstances, the *unexpired* benefits can never be realized by means of market transactions by shareholders, can never be enjoyed in advance, and should therefore never be recorded in any equity accounting model.[12] This also seems to imply that *all* equity accounting models should in some way utilize the entry and exit prices of equity for the computation of unexpired money gains (or losses).[13] But since share price appreciation cannot be delivered directly to shareholders by a company, there is no sense in which unexpired money gains can be regarded as an element of distributable equity income and on this criterion they should be entirely excluded from the ex post corporate income statements. But this by no means implies that a company should not disclose a time-series of (real) market values of debt and equity as an adjunct thereto.

EFFECTIVE RATES OF TAX ON CASH-FLOW EARNINGS

In calculating the effective rate of tax on a cash-flow basis, entity or equity concepts of periodic income can be adopted. However, as may be inferred from principles of tax neutrality, the paramount intention ought to be an assessment of the average tax burden on sustainable (that is, multiperiod) entity cash flows. Put another way, an accurate measure of taxable capacity ought to reflect an undertaking's ability to generate cash from economic activity irrespective of its financial structure. Be this as it may, both concepts of taxable capacity are adopted here.

[12] The ability of a cash-flow approach incorporating stock market entry and exit prices automatically to cope with this situation can be counted as a further merit of that system.

[13] It is arguable that, for certain periods at least, the market is just as likely to overestimate future inflation, in which case shareholders will suffer money losses.

It follows directly from equations (9), (10), and (11) — which allow for the unexpired benefits of capital expenditure, liquidity, and inventories — that the effective (multiperiod) ex post rates of tax on entity and equity cash flow are defined by T and T_e in equations (13) and (14) respectively,

$$V_o^{(e)} + V_o^{(d)} = \sum_{j=1}^{n} \frac{[(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j](1 - T)}{(1 + r)^j} + \frac{V_n^{(e)} + V_n^{(d)}}{(1 + r)^n} \tag{13}$$

$$V_o^{(e)} = \sum_{j=1}^{n} \frac{[(k_j - h_j) - (A_j + R_j - Y_j) - F_j \mp H_j \pm N_j \pm M_j](1 - T_e)}{(1 + r_e)^j} + \frac{V_n^{(e)}}{(1 + r_e)^n} \tag{14}$$

The entry and exit values, $V_o^{(e)}$ and $V_n^{(e)}$, can be regarded as "net of tax" market values since they represent the (observable) present value of a taxed expected equity cash-flow stream at end-years o and n respectively.[14]

Equation (13) can be re-written:

$$V_o^{(e)} + V_o^{(d)} = (1 - T) \sum_{j=1}^{n} \frac{(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j}{(1 + r)^j} + \frac{V_n^{(e)} + V_n^{(d)}}{(1 + r)^n} \tag{13a}$$

when, after substituting $\sum_{j=1}^{n} [k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - t_j]$ $(1 + r)^{-j}$ for $V_o^{(e)} + V_o^{(d)} - [V_n^{(e)} + V_n^{(d)}] (1 + r)^{-n}$

$$T = \frac{\sum_{j=1}^{n} t_j (1 + r)^{-j}}{\sum_{j=1}^{n} [(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j] (1 + r)^{-j}} \tag{15}$$

Similarly, equation (14) can be re-written as:

$$V_o^{(e)} = (1 - T_e) \sum_{j=1}^{n} \frac{D_j \pm B_j + t_j}{(1 + r_e)^j} + \frac{V_n^{(e)}}{(1 + r_e)^n} \tag{14a}$$

when, after substituting $\sum_{j=1}^{n} (D_j \pm B_j) (1 + r_e)^{-j}$ for $V_o^{(e)} - V_o^{(e)} (1 + r_e)^{-n}$

[14] See Appendix 1.

$$T_e = \frac{\sum_{j=1}^{n} t_j (1 + r_e)^{-j}}{\sum_{j=1}^{n} (D_j \pm B_j + t_j)(1 + r_e)^{-j}} \tag{16}$$

Generally speaking, the expressions for T and T_e that are defined by equations (15) and (16) are very accurately approximated by:

$$T = \frac{\sum_{j=1}^{n} t_j}{\sum_{j=1}^{n} [(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j]} \tag{17}$$

and,

$$T_e = \frac{\sum_{j=1}^{n} t_j}{\sum_{j=1}^{n} [D_j \pm B_j + t_j]} \tag{18}$$

This is an extremely important result[15] since it facilitates the calculation of T and T_e when, because of (sufficiently strong) multiple sign-changes, equations (9) and (11) yield multiple or indeterminate real solution values for r and r_e. In the latter circumstances, equations (15) and (16) can obviously not be solved for T and T_e.

The effective tax rates T, and T_e of the companies whose performances are reported in this paper are in fact computed on two bases, first, as illustrated in exhibit 1[16] and, thereafter, in accordance with equations (17) and (18), respectively. The tendency for the former method of calculation to understate the latter is ascribable to the fact that the cash-flow earnings defined by exhibit 1 ignore periodic liquidity changes, $\mp H_j$. As indicated by equations (9), (10), and (11), such changes should clearly be taken into account.

EFFECTIVE INTEREST COVER AND DEBT-EQUITY SUBSTITUTION

Interest cover is widely regarded as a measure of a firm's ability to meet its interest payments on a continuing basis. A more comprehensive idea is that of debt-servicing potential which includes a firm's capacity to meet its contractually determined debt-retirement schedules with or without resorting to external finance.

The distinction between interest cover and debt-servicing ability is

[15] See Appendix 2.
[16] See p. 26.

by no means clearly defined. Thus, interest rates embody expected inflation, and interest payments therefore include an element of capital repayment in addition to the conventional debt-retirement schedule per se. Put another way, if a sequence of interest payments F_1, $F_2, \ldots . F_n$, is re-expressed at a base-year price level (say that of mid-year n), the resultant sequence $F_1', F_2', \ldots, F_n'$ mainly represents the repayment of lenders' capital.[17] The noncapital element of the latter sequence may be assumed to comprise the personal taxes that lenders succeed in shifting forward into interest rates[18] and a premium that is commensurate with market risk and debt level of the firm in question.

If the proportion of the inflation-adjusted interest payment, F_j', which compensates for personal taxes and market risk is γ_j, the capital repayment is $(1 - \gamma_j)\, F_j'$. If the latter amount is not replaced by an equal tranche of new debt, then ceteris paribus, a firm's debt ratio will fall.

Under a neutral corporate tax system, wherein no element of the conventional interest payment, F_j, is tax deductible, the limit to a firm's ability to pay the noncapital component, $\gamma_j F_j$, is the size of its stream of post-tax entity earnings, $(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - t_j$, and "pure interest cover" may be defined as $\gamma_j F_j / [(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - t_j]$. In such a tax regime, debt-equity substitution occurs when:

$$(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - t_j - \gamma_j F_j - (D_j \mp B_j) > (1 - \gamma_j) F_j \tag{19}$$

and the resultant difference is financed with further debt $(N_j \pm M_j) - (1 - \gamma_j) F_j$, that is, with debt over and above that which is necessary to restore the amount, $(1 - \gamma_j)\, F_j$, which is repaid via the conventional interest payment, F_j.

In most corporate tax regimes, the conventional interest payment, F_j, is wholly tax deductible. Hence, if lenders are fully aware of the tax subsidy obtained by debt financing and are always willing to restore $(1 - \gamma_j)\, F_j$ with new debt, then if dividend policy, $D_j \pm B_j$, is predetermined, the maximum conventional interest payment, F_j^*, that can be paid in any year j without resorting to debt-equity substitution is given by:

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[17] Following the indexation procedure described earlier, $F_j' = F_j I_n / I_j$ $(j = 1, 2, \ldots, n)$.

[18] See R. C. Stapleton and C. M. Burke, *Tax Systems and Corporate Financing Policy,* Mongraph Series in Finance and Economics (New York: New York University, 1978).

$$(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - F_j^* - T_j[E_j^{(t)} - F_j^*] \\ - (D_j \pm B_j) - (1 - \gamma_j)F_j = 0 \tag{20}$$

when,

$$F_j^* = \frac{(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - T_jE_j^{(t)} - (D_j \pm B_j)}{\gamma_j - T_j} \tag{20a}$$

where, in year j, T_j and $E_j^{(t)}$ denote the corporate tax rate and taxable earnings before interest, respectively. Any excess of actual interest, F_j, plus dividends (net of new equity), $D_j \pm B_j$, over F_j^* results in debt-equity substitution.

Since, in most corporate tax regimes, an excess of conventional interest, F_j, over taxable earnings (before interest), $E_j^{(t)}$, does not qualify for a corporate tax repayment, equation (20) is subject to the constraint:

$$T_j[E_j^{(t)} - F_j^*] \geq 0.$$

The conventional interest payment, F_j, is also subject to a non-negativity requirement because negative interest (the excess of new debt over conventional interest) is not taxable, that is, F_j is tax deductible but $(1 - \gamma_j)$ F_j and $N_j + M_j - (1 - \gamma_j)F_j$ are not subject to corporation tax.

Apart from indicating the maximum conventional interest payment, F_j^*, which can be made in any year j, inequality (19) also indicates the degree of debt-equity substitution that may be associated with any given levels of interest, F_j, and shareholder cash flows, $D_j \pm B_j$. Thus, if

$$(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - \gamma_jF_j - T_j [E_j^{(t)} - F_j] \\ - (D_j \pm B_j) < 0 \tag{20b}$$

debt-equity substitution has taken place.

Practical notions of interest cover do not usually distinguish between the "pure interest payment," γ_jF_j, and the capital repayment $(1 - \gamma_j)F_j$, since it cannot always be taken for granted that $(1 - \gamma_j)F_j$ will be restored by lenders. Contractually determined interest and debt retirement schedules are commonly mirrored in standards for assessing a firm's ability to service such preferential charges from internally generated funds.

Given the level of investment,[19] the limit to a firm's ability to ser-

[19] In examining a firm's ex post debt servicing capacity, the level of investment is a fact. From a managerial standpoint, there may be quite significant discretion with respect to the level of investment.

vice and retire debt from internally generated finance depends upon the ratio of tax-deductible (conventional) interest payments, F_j, and loan repayments, $N_j + M_j$ to entity cash-flow earnings. If F_j can be tolerably approximated from existing and probable future commitments then, earnings volatility aside, the maximum internally financed loan repayment, $N_j^* + M_j^*$, in any year j is simply:

$$N_j^* + M_j^* = (k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - F_j - T_j\,[E_j^{(t)} - F_j]. \qquad (21)$$

SUMMARY OF AGGREGATE DATA ANALYSIS

This part summarizes the aggregate data analysis that is reported in detail elsewhere.[20]

The historic cost accounting performance of quoted companies in the U.K. manufacturing sector during the period 1954-76 can be juxtaposed with their cash-flow performance as in exhibit 1.

Exhibit 1. U.K. Quoted Manufacturing Companies: Weighted Average Profits and Weighted Average Cash Flows 1954-76[a]

Pre-depreciation profit	1,000	860	Operating cash flow
Depreciation	310	453	Capital expenditure
Profit before interest	690	407	Entity earnings[b]
less interest	97	97	*less* interest
Pre-tax profit	593	310	Pre-tax equity earnings
Tax @ 44%	260	260	Effective equity tax burden @ 84%[c]
Post-tax profit	333	50	Post-tax equity earnings
Dividends (40%)	133	133	Dividends (net of new equity capital)
		26	Liquidity change
Retained earnings	200	(109)	(Debt-financed deficit)

[a] Twenty-three-year averages of profits and cash flows initially restated at base-year prices (see exhibits 2 and 3).
[b] Operating cash flow minus net capital investment [see identity (4), p. 3].
[c] The effective entity tax burden in this example is 64 percent, namely, 260/407.
From 1954 to 1976, the market value of the companies' equity shares declined by 38 percent in real terms, after allowing for capital gains tax.

As virtually all the conclusions which emerge from this paper are concerned with the deviation between pretax historic cost profit and entity (cash-flow) earnings, it is appropriate to reiterate that the two components of this deviation are (a) periodic working capital investment, that is, periodic change in (receivables plus inventories less

[20] See Lawson, "Company Profitability."

payables), and (b) a depreciation shortfall equal to periodic capital investment (net of displacements) *minus* periodic depreciation (including accounting profits or losses on assets displaced.[21] At the aggregate level, the annual values of (a) and (b) have been roughly equal since 1954.

The customary objection that the latter definition of a depreciation shortfall ignores the unexhausted benefits of periodic capital expenditure is, as already discussed, accommodated by taking cognizance of the entry and exit market values of debt and equity capital. Like identities (1) to (5) inclusive, the right-hand column of exhibit 1 therefore reveals the earnings (or, more precisely, the constituents thereof) that are distributable from a company's standpoint.

In emphasizing that exhibit 1 is a caricature of the multiperiod aggregate performance, summarized in exhibits 2 and 3, at least two further qualifications should be entered. First, the twelve months' average time lag between the charging and payment of corporate taxes has been ignored in exhibit 1 in order to draw the possible decision-making consequences of the deviation between pretax profit and entity earnings into sharper focus. In all analysis contained in this paper, this time lag has been explicitly taken into account.

Secondly, and as already noted, the two effective rates of tax (on cash-flow earnings) defined in exhibit 1 are approximations which tend to *understate* the average multiperiod rates of tax defined by equations (13) and (14), respectively.[22] Both methods of computing effective tax rates are adopted hereafter. It should also be noted that if, as depicted in exhibit 1, dividends persistently exceed post-tax equity earnings, the effective equity tax rate will typically be lower than the effective entity tax rate. This follows from the definitions of effective tax rates that were derived earlier.

If, as is indeed the case, exhibit 2 accurately reflects the main features of the 1954-76 financial performance and financial behavior of U.K. manufacturing companies then, at this level of aggregation:

1. The cover for conventional interest payments has been overstated;
2. Enormous fiscal drag has taken place;
3. Dividends have been significantly uncovered; and
4. The resultant deficit financing by lenders has caused a significant increase in debt levels, that is, debt-equity substitution has occurred.

[21] See the section on pages 14 through 16.
[22] See page 22.

Exhibit 2. Published Profits and Equity Cash Flows of U.K. Manufacturing Companies 1954-76

Accounts for year	Number of companies	1 Published post-tax profit[a] £m.	2 Proposed net dividends £m.	3=2÷1 Historic cost dividend ratio %	4 Change in proposed dividends %	5 Post-tax equity cash-flow earnings[b] £m.	6=(1−5)÷1 Over-statement of profit[c] %
1954	2,892	692	260	38	19.8	137	80
5	2,913	780	286	37	10.0	− 83	111
6	2,931	759	295	39	3.2	− 48	106
7	2,879	771	323	42	9.5	− 29	104
8	2,815	817	334	41	3.4	222	73
9	2,714	1,018	443	44	32.6	311	69
1960	2,618	1,085	486	45	9.7	86	92
1	2,173	970	488	50	0.0	32	97
2	2,095	933	507	54	3.9	159	83
3	2,004	1,063	560	53	10.5	412	61
4	1,916	1,202	590	49	5.4	331	72
5	2,198	1,540	617	40	4.6	108	93
6	2,109	1,035	582	56	− 5.7	75	93
7	1,993	1,209	548	45	− 5.8	277	63
8	1,829	1,344	567	42	3.5	289	66
9	1,701	1,279	571	45	0.7	− 8	86
1970	1,308	1,369	569	42	− 0.4	− 51	93
1	1,239	1,591	650	41	14.2	907	33
2	1,168	2,294	704	30	8.3	1,071	48
3	1,116	2,824	878	31	24.7	46	98
4	1,084	2,602	905	35	3.1	−961	137
5	1,044	2,613	1,046	40	15.6	983	62
6	1,066	4,129	1,225	30	17.1	254	94
		Weighted average (%)		40			83

[a] The composition of column 1 is specified by identity (6) (see p. 14).
The post-tax published profits for the years 1967 to 72 (inclusive) are net of personal tax calculated at the standard (now basic) rate on proposed dividends which are expressed in the same way. This ensures a consistent treatment of taxation throughout the twenty-three–year period.
[b] Column 5 shows equity earnings expressed in money terms. These are defined by the left-hand side of identity (3).
[c] The arithmetic relationship between columns 1 and 5 is explained in the section on cash-flow statements expressed in money terms (see p. 12).
Sources: Annual Abstract of Statistics and Financial Statistics (London: Central Statistical Office).

Exhibit 3. U.K. Manufacturing Companies 1954-76: Entity Income, Debt and Equity Cash Flows Expressed at December 1974 Prices

		Entity Income						*Debt Proprietorship*			*Equity Proprietorship*
		1	2	3	4=(2+3)+1	5	6=1−2−3+5 =9+10	7	8	9=7+8	10
Accounts for year	Number of companies	Entity cash-flow earnings[a] £m.	Personal tax on interest paid[b] £m.	"Corporate" tax paid £m.	Composite tax rate (%) £m.	Change in cash increase (−) decrease (+) £m.	Post-tax entity earnings £m.	Interest paid (net of personal tax) £m.[b]	New debt finance	Post-tax debt cash flows £m.	Dividends less new equity capital[a] £m.
1954	2,892	2,517	55	2,018	82	+ 20	464	67	− 223	− 156	620
5	2,913	1,624	66	1,693	107	+ 334	199	89	− 321	− 232	431
6	2,931	1,787	75	1,731	101	+ 202	183	102	− 387	− 285	468
7	2,879	2,038	93	1,892	97	− 19	34	125	− 421	− 296	330
8	2,815	2,628	93	1,885	75	− 127	523	125	− 159	− 34	557
9	2,714	2,710	84	1,757	68	− 144	725	132	− 130	+ 2	723
1960	2,618	2,205	96	1,752	84	+ 177	534	153	− 247	− 94	628
1	2,173	2,278	119	1,895	88	+ 88	352	189	− 390	− 201	553
2	2,095	2,529	126	1,854	78	− 91	458	200	− 627	− 427	885
3	2,004	2,942	130	1,717	63	− 229	866	206	− 416	− 210	1,076
4	1,916	2,797	155	1,698	66	+ 118	1,062	244	− 499	− 255	1,317
5	2,198	2,578	192	1,866	80	+ 94	614	304	−1,203	− 899	1,513
6	2,109	2,603	252	1,845	81	− 71	435	360	−1,295	− 935	1,370
7	1,993	2,811	278	1,654	69	− 261	618	397	− 910	− 513	1,131
8	1,829	3,019	307	1,768	69	− 173	771	437	− 711	− 274	1,045
9	1,701	2,697	349	1,851	82	− 133	364	498	−1,052	− 554	918
1970	1,308	2,730	371	1,937	85	+ 65	487	528	−1,077	− 549	1,036
1	1,239	3,907	332	1,752	53	− 528	1,295	526	− 278	+ 248	1,047
2	1,168	3,874	381	1,453	47	−1,188	852	603	− 612	− 9	861
3	1,116	2,885	396	1,506	66	− 715	268	925	−2,170	−1,245	1,513
4	1,084	2,268	496	1,673	96	+ 458	557	1,159	−1,907	− 748	1,305
5	1,044	3,719	516	1,358	50	− 828	1,017	956	− 339	+ 617	401
6	1,066	2,374	448	862	55	− 990	74	870	−1,212	− 342	416
average 1954-76		£2,676	£235	£1,706	73	−£171	£564	£400	−£712	−£312	£876

[a] Operating cash-flow minus capital expenditure.
[b] Calculated at the standard (or basic) rate of income tax payable in the year in question.

Other things being equal, the substitution of debt for equity will result in an increase in the value of debt and, tax effects aside, an equal reduction in the market value of equity. The substantial decline in the (real) market value of equity (see exhibit 5) that has taken place in the United Kingdom since April 1965 has not been offset by an equal increase in the market value of debt.[23] The debt-equity substitution argument therefore should be supplemented with, for example, a decline in the quality of entity earnings.[24]

Exhibit 4. Real Rates of Return from Manufacturing Companies 1954-76

I. *Market values of capital at December 1974 prices*			
	Entity £m.	Debt £m.	Equity £m.
April 1954	31,264	2,385	28,879
April 1965	53,449	5,841	47,608
April 1977	27,233	9,276	17,957
II. *Rates of return in real terms (net of all taxes)*			
	Entity % p.a.	Debt % p.a.	Equity % p.a.
1954-64	6.2	3.1	6.6
1965-76	−3.9	−0.9	−4.6
1954-76	1.4	−0.2	1.9

Notes

i. Entity and equity values at 1977 are net of capital gains tax at 17 percent on share-price appreciation (measured in money terms) from April 1965 to April 1977.

ii. The 1977 values are derived by capitalizing proposed dividends and interest at the April 1977 dividend and redemption yields. The equity values for earlier years are deduced from the de Zoete Equity Index.

iii. Debt includes bank overdrafts and short-term loans, both of which are extracted from the published aggregate balance sheets for each of the three years. The market values of long-term debt in 1954 and 1965 represent published long-term interest capitalized at the respective debenture yields published in those years.

iv. The rates of return for each of the three periods shown are the internal rates of return which equate the "entry" values with the stream of cash flows and "exit" value corresponding thereto. (See page 17.) The respective cash-flow streams are shown in exhibit 3, column 6 (entity), column 9 (debt), and column 10 (equity).

Aggregate Cash-Flow Data and the Efficient Market Hypothesis

The enormous deviations between the historic cost and cash-flow magnitudes shown in exhibit 1 prompt one to question whether, like lenders, the British Treasury, and company directorates, the market has also been fooled by the historic cost-accounting model.

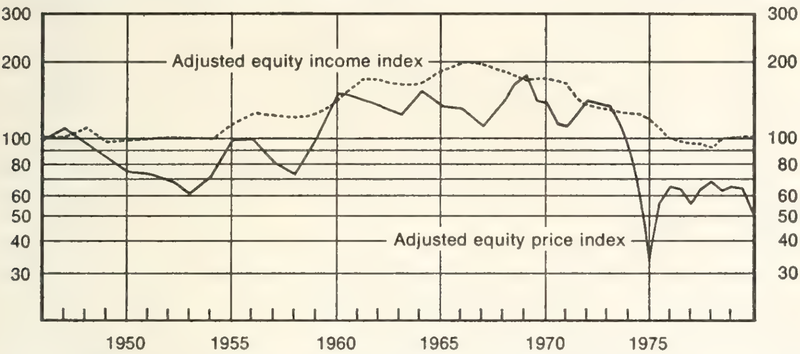
The time-series relationship between the income-gearing ratio[25]

[23] See exhibit 4.

[24] Lawson, "Company Profitability," pp. 30-37.

[25] Conventional interest divided by entity earnings (as defined in exhibit 1).

Exhibit 5. Equity Price & Income Indices Adjusted for Cost of Living



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and equity earnings on the one hand, and the behavior of the de Zoete Equity Index (expressed in real terms) on the other, suggests that a combination of low-equity earnings and high-income gearing is, relatively speaking, usually associated with a low end-year index value and vice versa. This raised the presumption that the data may afford at least a rough-and-ready statistical test of the following semistrong version of the efficient market hypothesis.[26]

In forming its expectations of future dividends, the market uncovers a company's past and current underlying cash-flow situation and, using this and all other relevant known and knowable information, estimates the size and quality of its future cash flows. This process results in the simultaneous determination of its share prices.

To test this hypothesis, the following multiple regression (adaptive expectations) model was used:

$$EI_j = x_1 + x_2\,ECFE_j + x_3\,ECFE_{j-1} - x_4\,CV_{(j,j-3)} \qquad (I)$$

[26] The test is rough-and-ready because aggregate data are basically unsuitable for the task. Thus, the accounts for each individual company included in the sample are for accounting years which end between 6 April of the year shown and 5 April in the following year. The aggregatetd accounts for the years shown therefore span a period of twenty-four months. For example, a company making up its accounts to 10 April 1954 would be included in the year 1954, as would a company reporting on a financial year ending 31 March 1955. Each individual sample year therefore includes accounts for the last nine months of the previous calendar year and for the first three months of the succeeding calendar year.

where,

EI_j	denotes the (January 1st) level of the de Zoete cost of living-adjusted equity price index for year j;
$ECFE_j$	denotes post-tax equity cash-flow earnings in year j as defined by identity (3);[27] and
$CV_{(j,j-3)}$	represents the coefficient of variation of the past four years' equity cash-flow earnings about their four-year mean.

The previous year's ECFE is used as a proxy for the expected value of equity cash-flow earnings estimated by the market in the individual year in question. The coefficient of variation, CV, is a proxy for the degree of risk which characterizes expected equity cash-flow earnings which, in turn, may be assumed to be a function of the volatility of post-tax entity income and of the expected income gear ratio.

A trend in both the EI and ECFE series could give spurious correlation in the data and lead to misleading statistical results. To avoid this, the raw data were differenced,[28] and the resultant series was used for statistical testing. Differencing does not change the model — the model indicates the change over the year which, together with the previous year's absolute figure, gives the current year's actual value for the series.

In that the suggested model explains approximately 60 percent of the movements in EI, it stands up quite well to the data. The results (using the backshift operator) are:

$$\underset{(\text{st. errors})\ (\text{t ratio})}{(1-B)EI_j} = 3.142 + \underset{\substack{0.0159\\4.675}}{0.744}(1-B)ECFE_j + \underset{\substack{0.0163\\2.364}}{0.0385}(1-B)EGFE_{j-1} - \underset{\substack{15.13\\1.266}}{19.15}(1-B)CV_{(j,j-3)}$$

R-squared = 0.6012; Durbin-Watson statistic = 2.043; degrees of freedom 18 − 3; and F test = 8.70.

Having established the model, it was further tested on random samples of the data points. The results were encouraging in that only the constant varied substantially (its range was 32 to −4), and the R-squared was always above 0.58.

The cash-flow hypothesis may be tested indirectly by regressing an equity price index expressed in *money terms* on the historic cost ac-

[27] Whereas EI is the level of the index on 1 January, ECFE denotes earnings aggregated over a two-year period ending three months later (see previous footnote).

[28] Differencing means that the change in the series over the year is used instead of the absolute value. This is represented by the backshift operator, B, where $(1-B)X_j = X_j - X_{j-1}$, the difference over the year in series X_j.

counting variables corresponding to those included on the right-hand side of equation (I). Such a model is:

$$EI(m)_j = x_1 + x_2\,HCP_j + x_3\,HCP_{j-1} - x_4\,CV_{(j,j-3)} \qquad \text{(II)}$$

where,

$EI(m)_j$ denotes the level of de Zoete equity price index (on 1st January) expressed in money terms for year j;

HCP_j stands for actual historic cost profit (that is, not re-expressed at base year prices) for year j; and,

$CV_{(j,j-3)}$ represents the coefficient of variation of the past four years' historic cost profits about their four-year mean.

The results yielded by model II are counter-intuitive.[29] They are:

$$(1-B)EI(m)_j = 106.94 - \underset{\substack{0.1955 \\ 0.433}}{0.085}(1-B)HCP_j - \underset{\substack{0.21404 \\ 3.276}}{0.701}(1-B)HCP_{j-1} + \underset{\substack{1118.1 \\ 0.695}}{777.02}(1-B)CV_{(j,j-3)}$$

(st. errors) 0.1955, 0.21404, 1118.1
(t-values) 0.433, 3.276, 0.695

R-squared = 0.3162; Durbin-Watson statistic = 2.836; degrees of freedom 18 − 3; and F test = 3.62.

It is tempting to conclude that cash-flow data re-expressed in terms of a base-year price level constitute highly relevant information for stock market investors, and that historic cost accounts per se are apparently ignored by the market while being taken seriously by lenders, company directorates, and the tax authorities.

ANALYSIS OF INDIVIDUAL COMPANY DATA

As previously noted, the relative orders of magnitude shown in the right-hand column of exhibit 1[30] reveal the weighted average cash-flow performance of U.K.-quoted manufacturing companies during 1954-76. The extent of the dispersion about this average across companies is clearly of interest. To reveal dispersion, the accounts of nine of the companies that are included in the F.T. 30 Share Index were restated on a multiperiod cash-flow basis in both money and real terms. The companies selected and the inclusive years covered are:

Blue Circle	(1959-77)	Bowater	(1961-78)	John Brown	(1965-79)
Coats Patons	(1962-78)	Dunlop	(1960-78)	E.M.I.	(1961-78)
I.C.I.	(1961-78)	Plessey	(1963-79)	Tesco	(1960-79)

The analyses of their cash flows, restated at December 1978 prices, are summarized in exhibit 6.

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[29] That is to say, the signs preceding the second, third, and fourth coefficients are the wrong way around.

[30] See page 26.

Exhibit 6. Average Annual Cash-Flow Performance of Nine U.K. Companies Restated at December 1978 Prices

	Bowater 1961/78 £m	*John Brown 1965/79 £m*	*Coats Patons 1962/78 £m*	*Dunlop 1960/78 £m*	*E.M.I. 1961/78 £m*	*I.C.I. 1961/78 £m*	*Plessey 1963/79 £m*	*Tesco 1960/79 £m*	*Blue Circle 1959/77 £m*	
1. Entity earnings	+21.98	+4.65	+38.97	+30.73	+ 4.79	+203.55	+15.07	+11.79	+26.73	$(k_j - h_j) - (A_j + R_j - Y_j)$
2. *less* interest	−25.82	−2.74	−10.26	−26.31	− 8.97	− 84.94	− 8.30	− 0.08	− 6.82	F_j
3. Pre-tax equity earnings	− 3.84	−1.91	−28.71	+ 4.42	− 4.18	+118.61	+ 6.77	+11.71	+19.91	
4. Tax paid	−26.90	−2.60	−31.38	−32.89	−18.78	−169.78	−21.41	− 7.87	−19.83	t_j
5. Payments to minorities	− 2.14	−0.49	− 0.47	+ 1.42	− 1.19	− 0.22	+ 0.27	+ 0.18	− 1.19	
6. Post-tax equity earnings	−32.88	−1.18	− 3.14	−27.05	−24.15	− 51.39	−14.37	+ 4.02	− 1.11	
7. Dividend payments[a]	+ 8.26	−0.70	−12.28	− 1.41	+ 9.22	− 42.83	+ 7.04	− 1.87	− 7.01	D_j
8. Increase in cash	− 7.86	−1.72	− 0.51	− 3.27	− 3.58	− 67.72	− 1.73	− 2.75	− 2.65	H_j
9. Deficit(−) surplus(+)	−32.48	−3.60	−15.93	−31.73	−18.51	−161.94	− 9.06	− 0.60	−10.77	
Financed by:										
10. Bank overdraft	+12.82	+2.56	+ 7.85	+14.19	+ 4.06	+136.33	+ 5.06	+ 0.07	+ 3.13	M_j
11. Loan capital	+19.65	+1.07	+ 8.05	+17.55	+14.42	+ 25.66	+ 3.98	+ 0.53	+ 7.65	N_j

[a] Net of equity capital raised or repaid.

To supplement the individual company (multiperiod) cash-flow analyses, their annual (equity) market values were ascertained and, like the cash flows, restated at a base-year price level. An indication of the behavior of the total (real) market values (debt plus equity) of the nine companies over the respective observation periods is provided by exhibit 7 which also shows the real rates of return they generated for their lenders and shareholders.

Apart from examining for dispersion about the averages, shown in exhibit 1, a further aim was the formulation of a multiple regression model which hopefully would explain the serial behavior of a company's equity market value in terms of its equity cash-flow performance. A long search for such a model has not proved fruitful. Alternative specifications will be tried in the near future. As there is a stronger visual correlation between the equity cash flows of individual companies and their equity market values than between the latter and historic cost profits, there is a presumption that the appropriate model will be a cash-flow specification. But if any model is to provide a convincing explanation of the relationship between performance measured in accordance with some accounting method and stock market performance, it will need to take cognizance of post-tax earnings, risk and debt-equity substitution.

FINANCIAL ANALYSIS OF INDIVIDUAL COMPANY DATA

Interest Cover

The "quasi-conventional" interest cover ratios that may be derived from exhibit 6 (row 1 divided by row 2) suggest that seven of the nine

Exhibit 7. Market Values and Internal Rates of Return at December 1978 Prices

	Opening values			*Closing values*			*Rates of return*[a]		
	Debt £m.	Equity £m.	Entity £m.	Debt £m.	Equity £m.	Entity £m.	Debt[b] %	Equity[c] %	Entity %
Bowater	228	468	696	258	293	551	−5.3	− 5.4	− 5.2
John Brown	0	89	89	10	98	108	*	1.6	+ 0.6
Coats Patons	27	460	487	57	203	260	−8.3	+ 3.0	− 2.4
Dunlop	87	224	311	236	103	339	−2.4	− 3.5	− 2.9
E.M.I.	17	179	196	146	156	302	−5.0	− 6.1	− 5.7
I.C.I.	281	3,670	3,951	750	2,205	2,955	−9.9	− 1.3	− 3.0
Plessey	61	230	291	56	195	251	−4.1	− 1.9	− 2.8
Tesco	1	10	11	10	221	231	−6.6	+18.5	+18.0
Blue Circle	8	416	424	86	202	288	−2.6	− 1.4	− 1.6

[a] Computed in accordance with equations (9), (10) and (11), p. 18.
[b] Net of tax on interest payments at the rate of 23 percent.
[c] Net of tax on dividend payments at the standard rate of income tax.
* Indeterminate.

Exhibit 8. "Quasi-Conventional" Interest Cover Ratios

Inclusive years		*Interest cover ratio (see note)*	*Interest cover ratio since 1974*
1961-78	Bowater	0.85	1.59
1965-79	John Brown	1.70	2.80
1962-78	Coats Patons	3.80	4.82
1960-78	Dunlop	1.17	1.04
1961-78	E.M.I.	0.53	1.58
1961-78	I.C.I.	2.40	2.04
1963-79	Plessey	1.82	3.04
1960-79	Tesco	∞	∞
1959-79	Blue Circle	3.92	5.28

Note. Derived from exhibit 6 (row 1 ÷ by row 2).

companies had (conventional) interest charges on internally generated funds that were significantly higher than is generally perceived as normality by lending institutions (see exhibit 8). In that the decisions to lend to the nine companies in question would have been influenced by conventional historic cost-interest cover yardsticks, such an outcome would have been virtually inevitable.

In that the stock appreciation tax reliefs that were introduced in November 1974 have ameliorated the pressure on corporate financial viability, the interest cover ratios that have emerged since that date are of particular significance. These are separately indicated in exhibit 8. In six of the nine cases, the ratios of conventional interest to internally generated funds have strengthened since 1974. Those of I.C.I. and Dunlop have deteriorated. Except for Coats Patons and Blue Circle, the values shown in the second column of exhibit 8 are much lower than the conventional interest-cover yardsticks derived from the companies' published accounts. Moreover, as discussed in the concluding section of this paper, the joint effect of interest and tax commitments is the crucial consideration in assessing a company's financial viability.

Effective tax rates. As the analysis of tax rates implies, (effective) corporate tax rates may reflect either equity or entity concepts of cash-flow income. The distinction between the equity tax rates defined by equation (18)[31] and exhibit 1[32] should also be emphasized.

The T_e defined by equation (18) measures the rate of tax on equity

[31] See page 23.
[32] See page 26.

Exhibit 9. Effective Rates of Tax on Equity Earnings

				since 1974	
(1) Inclusive years		(2)[a]	(3)[b]	(4)[c]	(5)[d]
		%	%	%	%
1961-78	Bowater	∞	144	177	109
1965-79	John Brown	136	79	16	1,766
1962-78	Coats Patons	109	72	66	76
1960-78	Dunlop	744	96	1,816	104
1961-78	E.M.I.	∞	196	282	140
1961-78	I.C.I.	143	80	146	94
1963-79	Plessey	316	149	91	89
1960-79	Tesco	67	81	51	59
1959-79	Blue Circle	100	74	53	71

[a] Computed in accordance with exhibit 1, p. 26, and derived from exhibit 6 [row 4 ÷ row 3].
[b] Computed in accordance with equation (18) and derived from exhibit 6 [row 4 ÷ (row 4 + row 7)].
[c] Computed as in column (2) above using only the post-1974 data included in exhibit 6.
[d] Computed as in column (3) above using only the post-1974 data included in exhibit 6.

capital and, among other things, will indicate when taxation has become confiscatory and therefore a deterrent to equity investment. As previously described, T_e embodies share-price appreciation (or depreciation). This explains why shareholders may receive cash from their companies year in, year out, while sustaining both taxes at rates exceeding 100 percent and negative rates of return.

The equity tax rate defined by exhibit 1 lacks the rigor of T_e. The exhibit 1 equity version nevertheless facilitates a comparison with the conventional approach to the measurement of the corporate tax burden and, in treating interest payments as a tax-deductible expense, provides some indication of the effect of taxes on corporate financial viability.

Columns (2) and (3) of exhibit 9 show the (average) effective rates of tax [calculated in accordance with exhibit 1 and equation (18), respectively] on the equity cash-flow earnings of the nine companies in the sample for the inclusive years indicated in column (1). Columns (2) and (3) both suggest that the U.K. corporate tax system virtually confiscated equity earnings.[33] If so, dividends (net of new equity raised) could only have been paid from new debt.

In the discussion of effective interest cover and debt-equity substitution on pages 23-26, it was argued that if company cash-flow performances are restated at a base-year price level, that is, in real terms,

[33] In that all nine companies generated a significant proportion of their income abroad, this proposition should be qualified accordingly.

interest payments (for example, those disclosed in exhibit 6) mainly represent the repayment of lenders' capital. Thus, leaving aside the fact that corporate debt is not risk free and that interest payments may therefore embody a risk premium, corporate taxable capacity should, so the argument runs, be measured on an entity basis. A counter-argument that follows from the discussion of the real cost of debt is that an effective equity tax rate calculated in accordance with equation (18) fully allows for repayments of lenders' capital which amounts are reflected in share values.[34] Be this as it may, an entity concept of taxable capacity is defensible in its own right. That is to say, a firm's taxable capacity should be measured independently of the manner in which that firm is financed — there should be no tax discrimination in favor of debt.

While maintaining the general substance of the analysis of effective interest cover and debt-equity substitution, (and the previous paragraph), we now ignore the market risk premium that may be embodied in the cost of corporate debt and assume that the proportion, γ_j, of interest payments, F_j, represents the personal taxes that lenders succeed in shifting forward into the interest rate. On this assumption, $\gamma_j F_j$ becomes a charge on entity earnings and should be added to corporate tax payments accordingly. Such an adjustment using a 23 percent personal tax rate is included in exhibit 10.[35]

Effective entity tax rates may be derived from exhibit 10 in accordance with exhibit 1 and equation (17), respectively. The relevant figures are shown in exhibit 11.

The effective entity tax rates shown in columns (2) and (3) of exhibit 11 provide compelling evidence of the confiscatory character of the corporate tax regimes that have operated in the United Kingdom in the last two decades. Moreover, the values in columns (4) and (5) of exhibit 11 strongly contradict the new conventional wisdom to the effect that the 1974 stock appreciation relief has roughly eliminated the effects of inflation on taxable earnings.[36]

In concluding this discussion of corporate taxes, mention must be made of the popular view that the only corporation tax paid by companies is the advance corporation tax (ACT) that is simultaneously

[34] See pages 20-23.

[35] Judging from the evidence cited in Stapleton and Burke, 23 percent is a conservative estimate of the tax shifted forward into interest rates.

[36] This view was recently reiterated by the governor of the Bank of England. See G. Richardson, "Companies, Inflation and Taxation," *Bank of England Quarterly Bulletin* (December 1979): 409-15.

Exhibit 10. Adjusted Effective Tax Burden on Entity Cash Flows Expressed at December 1978 Prices

	Bowater 1961/78 £m.	J. Brown 1965/79 £m.	Coats Patons 1962/78 £m.	Dunlop 1960/78 £m.	E.M.I. 1961/78 £m.	I.C.I. 1961/78 £m.	Plessey 1963/79 £m.	Tesco 1960/79 £m.	Blue Circle 1959/77 £m.
1. Entity earnings	+21.98	+4.65	+38.97	+30.73	+ 4.79	+203.55	+15.07	+11.79	+26.73
2. Adjusted tax paid[a]	−32.84	−3.23	−33.69	−38.94	−20.84	−189.32	−23.32	− 7.89	−21.40
	−10.86	+1.42	+ 5.28	− 8.21	−16.05	+ 14.23	− 8.25	+ 3.90	+ 5.33
3. Payments to minorities	− 2.14	−0.49	− 0.47	+ 1.42	− 1.19	− 0.22	+ 0.27	+ 0.18	− 1.19
4. Dividend payments[b]	+ 8.26	−0.70	−12.28	− 1.41	+ 9.22	− 42.83	+ 7.04	− 1.87	− 7.01
5. Increase in cash	− 7.86	−1.72	− 0.51	− 3.27	− 3.58	− 67.72	− 1.73	− 2.75	− 2.65
6. Deficit(−) surplus(+)	−12.60	−1.49	− 7.98	−11.47	−11.60	− 96.54	− 2.67	− 0.54	− 5.52
7. Bank overdraft	+12.82	+2.56	+ 7.85	+14.19	+ 4.06	+136.33	+ 5.06	+ 0.07	+ 3.13
8. Loan capital	+19.65	+1.07	+ 8.05	+17.55	+14.42	+ 25.66	+ 3.98	+ 0.53	+ 7.65
9. Interest[c]	−19.88	−2.11	− 7.90	−20.26	− 6.91	− 65.40	− 6.39	− 0.06	− 5.25
10. Net debt financing	+12.59	+1.52	+ 8.00	+11.48	+11.57	+ 96.59	+ 2.65	+ 0.54	+ 5.33

[a] Including income tax @ 23 percent on interest.
[b] Net of equity capital raised or repaid.
[c] Net of tax @ 23 percent.

Exhibit 11. Effective Rates of Tax on Entity Earnings

				since 1974	
(1) Inclusive years		(2)[a] %	(3)[b] %	(4)[c] %	(5)[d] %
1961-78	Bowater	149	233	80	95
1965-79	John Brown	69	110	19	352
1962-78	Coats Patons	86	88	57	63
1960-78	Dunlop	127	142	105	143
1961-78	E.M.I.	435	1,723	118	143
1961-78	I.C.I.	93	139	86	146
1963-79	Plessey	155	175	68	80
1960-79	Tesco	67	87	51	76
1959-79	Blue Circle	80	89	47	72

[a] Computed in accordance with exhibit 1, note 3 (after adjusting for personal taxes), and derived from exhibit 10, that is, row (2) divided by row (1).
[b] Computed in accordance with equation (17) and derived from exhibit 10, that is, row (2) divided by [row (1) plus row (5)].
[c] Computed as in column (2) above using only the post-1974 data included in exhibit 10.
[d] Computed as in column (3) above using only the post-1974 data included in exhibit 10.

payable with dividends. As exhibit 10 suggests, and as is confirmed by an examination of each individual year's data since 1974, the ACT paid by all nine companies has represented only a small fraction of their total corporate tax burdens.

Dividend cover and debt-equity substitution. A comparison of lines 6 and 7 in exhibit 6 suggests that Tesco alone succeeded in covering its average dividend payment over the years in question. (The shareholders of Bowater, E.M.I., and Plessey were net cash-flow contributors over the respective eighteen-, eighteen-, and seventeen-year periods analyzed.)

Assessing dividend cover by reference to exhibit 10, column 6 [that is, in accordance with inequality (20b)],[37] all nine companies engaged in debt-equity substitution (on average every year) over the respective periods considered. However, the shareholders (including minorities) of Bowater, Dunlop, E.M.I., and Plessey were annual cash-flow contributors (on average), and debt-equity substitution was dividend induced (including payments to minorities) to the extent of 63, 32, and 77 percent of dividends in the cases of Coats Patons, Tesco, and Blue Circle, respectively. In the two other cases (John Brown and I.C.I.), dividends were wholly debt financed.

If dividend policy is an active decision variable and is based on historic cost profits, debt-equity substitution is the predictable outcome

[37] See page 25.

mentioned at the outset. While the level of debt raising was trivial in Tesco's case, the changes in the relative market values of debt and equity (shown in exhibit 7)[38] are generally consistent with a significant degree of debt-equity substitution stemming from uncovered dividend payments.

Since 1974, the shareholders of Bowater, John Brown, Dunlop, and E.M.I. have been net cash contributors and these companies have, on average, also raised debt in each year during the period. During this period, the dividends paid to the shareholders of Coats Patons, I.C.I., Plessey, Tesco, and Blue Circle were debt-financed to the extent of 29 percent, 100 percent, 41 percent, and 89 percent, respectively.

Market values. The entity market values of Bowater, Coats Patons, I.C.I., Plessey, and Blue Circle declined in real terms over the periods considered. In the cases of Coats Patons, I.C.I., and Blue Circle, real debt levels rose significantly causing a reverse leverage effect on their equity market values. The percentage declines in the latter were 28 percent, 54 percent, and 40 percent for Coats Patons, I.C.I., and Blue Circle, respectively. Notwithstanding net cash-flow contributions from their respective shareholders, there were real declines in the market values of both debt and equity in the cases of Bowater and Plessey.

The real increase in the entity market value of E.M.I. must be qualified by the fact that its shareholders were net cash contributors over the eighteen-year observation period. Notwithstanding this equity cash injection, its equity market value declined by 13 percent in real terms.

The entity market values of the three remaining companies, namely, John Brown, Dunlop, and Tesco, increased in real terms. In the cases of John Brown and Tesco, the real market values of both debt and equity showed increases. In Dunlop's case, an increase in entity market value was associated with a 271 percent increase in the market value of its debt and a 54 percent decline in the market value of its equity which, in 1978, constituted 22 percent of its total market value.

Taking cognizance of the debt ratios of Bowater, Dunlop, and E.M.I., expressed on a market value basis, it is reasonable to question whether these companies may not be geared to precarious levels. Their debt levels constituted 53 percent, 78 percent, and 52 percent of their respective entity values at their 1978 financial year ends.

Implicit in the foregoing paragraphs and in the discussion in the earlier sections is the proposition that (real) multiperiod cash-flow

[38] See exhibit 7.

analyses and (real) changes in market values are integrally related. Viewed on its own, the multiperiod cash-flow analysis understates the financial performance of four of the companies in the sample and overstates it in the case of the other five. The degree of profitability achieved by the nine companies over the respective (roughly eighteen-year) periods considered is more decisively indicated by the real rates of return shown in exhibit 7.[39] On these criteria, shareholders did slightly better than lenders and only Tesco and John Brown were profitable as entities over the period as a whole.

CONCLUSION

It should be questioned finally whether the combination of interest and taxes that is borne by U.K. companies is a dangerous threat to their financial viability. Notwithstanding the obligation under debt contracts to pay interest payments which effectively provide for the return of lenders' capital *as a prior charge on equity cash-flow earnings,* the interpretation afforded by exhibit 10 (line 1 — line 2) probably represents the most appropriate statement of corporate financial viability in a fundamental economic sense. Over the respective (roughly eighteen-year) observation periods, four companies, namely, Bowater, Dunlop, E.M.I., and Plessey were, judged by the latter criteria, not financially viable.

Since 1974 the position has improved. Only Dunlop and E.M.I. seem, on average, to have satisfied the above definition of corporate bankruptcy.[40] It is, however, noteworthy that both of these companies generated positive pretax entity earnings in three of the four years between 1974 and 1978. Their annual averages for this four-year period were £39.2m. and £23.45m. respectively compared with the £30.7sm. and £4.79m. shown in exhibit 10 (for periods of nineteen and eighteen years, respectively). It may therefore be concluded that the U.K. corporate tax system still lacks the inbuilt safeguards that would prevent it from converting financial viability into corporate bankruptcy.[41]

It must also be added that companies cannot rely on the possibility that lenders will always modify debt contracts in accordance with the notion of "corporate financial viability in a fundamental economic sense" and will usually be more impressed by lines 1 and 2 of exhibit

[39] Ibid.

[40] See exhibit 11, column (4).

[41] As shown elsewhere (See Lawson, "Company Profitability," pages 30-37), the U.K. system of corporation tax also increases the volatility of past tax company earnings.

6. When conventional interest payments exceed adjusted taxes, financial viability is obviously more stringently evaluated by the latter comparison.

There is also the point that taxable capacity is measured independently of cash-flow interest cover. Thus, the combined, legally enforceable burden of interest and taxes may be potentially overwhelming in many cases in practice. Column (4) of exhibit 9[42] suggests that this could be true of Bowater, Dunlop, E.M.I., I.C.I., and Plessey. It says much (or little) for the U.K. lending mechanism that such companies do not encounter serious financial trouble.

The implications of the results presented in this paper for the formation of expectations by businessmen are of special importance. If, intuitively or otherwise, businessmen are aware of the effect of a hostile fiscal environment on the returns to investment, they will respond accordingly. There seems little point in examining the efficiency of the U.K. lending mechanism[43] in seeking explanations for a low level of investment in circumstances in which dividends are habitually debt financed because the returns to equity investment are confiscated by the tax system. Though there is some dispersion about the averages revealed by the aggregate data, both the individual and aggregate results are consistent with the hypothesis that the relatively low level of U.K. corporate investment has been caused by the belief that investment is unprofitable because of confiscatory taxation.

Turning to the role of the accountant, the evidence presented in the foregoing pages suggests that multiperiod cash-flow performance is a feature of corporate sector life which can only be ignored by accountants at their peril. In not fully understanding the inherent tendency of historic cost profit consistently to exceed cash-flow earnings, U.K. accountants have also generally failed to recognize the permanent threat to corporate financial viability (and corporate continuity) posed by historic cost-based decisions at the corporate level, not to mention the clear implications from a managerial decision-making standpoint. If accountants can be taken by surprise by the relative orders of magnitude disclosed in this paper, their technical competence must be open to serious doubt. In this regard it must, of course, be stressed that the results reported here are derived from British data. While the British themselves are often quick to stress that things are different in Britain, there are in fact strong a priori

[42] See exhibit 9.

[43] See the terms of reference of the *Committee to Review the Functioning of Financial Institutions.*

grounds for assuming that this paper may reveal the symptoms of a condition that is endemic throughout Europe and most of the English-speaking world.

Britain is probably an object lesson on the economic and financial consequences of taxation, dividend, and lending decisions that are based on historic cost accounting measures (or some variant thereof). The British postwar experience may indeed receive a special place in the annals of economic history. Advanced and developing economics which rely on the joint stock enterprise, to organize economic activity and act as the engine of real economic growth, can learn much from the British experience.

So too can those who reject the ethic of capitalism and seek to bring about the demise of capitalistic economies. As Rosa Luxemburg and Lenin were well aware, social, political, and economic stability are heavily dependent upon a stable monetary system. The second half of the twentieth century may well show that profligate corporate financial behavior, stemming from taxation, borrowing, and dividend policies that were wrongly based (and badly documented), has the same power as monetary policy as a means of destroying the political, social, and economic fabric of democratic societies. Thus, the desire of the Marxist wing of the British Labor Party to nationalize the U.K. banking system may not be unconnected with its long-term plans for the direction of the manufacturing sector. Should the substitution of debt for equity capital continue at its present rate, then, sooner or later, whoever controls the banks will also control U.K.-listed manufacturing companies.

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APPENDIX 1.

Although not needed for the analysis which follows, the corresponding pretax entry and exit values may be defined as:

$$V_o^{(e)}/[1-\overline{T}_e^{(o)}] \text{ and } V_n^{(e)}/[1-\overline{T}_e^{(n)}]$$

where $\overline{T}_e^{(o)}$ and $\overline{T}_e^{(n)}$ denote expected tax rates as at end-years o and n respectively. This proposition can be elaborated as follows. In the absence of taxes, the observable end-year o market value, P_o, of an expected perpetual income stream, $\bar{x}_1, \bar{x}_2, \ldots,$ may be defined as:

$$P_o = \sum_{j=1}^{n} \frac{\bar{x}_j}{(1+\bar{r})^j} + \frac{\overline{P}_n}{(1+\bar{r})^n} \text{ where } \overline{P}_n = \sum_{j=n+1}^{\infty} \frac{\bar{x}_j}{(1+\bar{r})^j}$$

and $\bar{r}$ denotes a cost of capital that is commensurate with the risk characterizing the income stream in question. If the expected cash flows, $\bar{x}_j$, are now assumed to be taxable, the position changes to:

$$V_o = \sum_{j=1}^{n} \frac{\bar{x}_j(1-\overline{T})}{(1+\bar{r})^j} + \frac{\overline{V}_n}{(1+\bar{r})^n}$$

where, $V_o = P_o(1-\overline{T})$ and $\overline{V}_n = \overline{P}_n(1-\overline{T})$ and $\overline{T}$ is the expected rate of tax.

APPENDIX 2.

The robustness of (17) and (18) can readily be tested by computing equations (15) and (16) for a large range of positive and negative values (including zero) of r and r_e respectively. The rare cases in which the values of T and T_e yielded by equations (17) and (18) do not accurately approximate the respective values yielded by (15) and (16) are due to multiple sign changes in cash flows which ultimately result in inconsistencies between the signs of

the right-hand sides of equations (15) and (17) and between those of the right-hand sides of (16) and (18).

A clue as to why (17) and (18) are good approximations of (10) and (11) respectively is to be found in equations (9) and (11). Using equation (11), if $V^{(e)} + V^{(d)} = V_n^{(e)} + V_n^{(d)}$ and if $(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j$ and t_j are both constant then,

$$r = \frac{(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j - t_j}{V_o^{(e)} + V_o^{(d)}}$$

$$= \frac{[(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j](1 - T)}{V_o^{(e)} + V_o^{(d)}}$$

when,

$$T = \frac{t_j}{(k_j - h_j) - (A_j + R_j - Y_j) \mp H_j}$$

Regulation of Financial Accounting: An International Perspective

DHIA D. AL HASHIM*

Accounting regulations have long been recognized in most countries as a means of securing the reliability of accounting reports. Harmonizing the manner in which reports are prepared can ensure that accounting regulations are of real value to their users.

The methods of producing regulations have varied from place to place. In some countries, for example, the accounting profession has led in developing accounting regulations. In other countries, regulations are enforced on the accounting profession through legislation. In either case, the determining factors as to who actually establishes accounting regulations appear to be the status and the size of the accounting profession in those countries. For example, the relatively small size of the accounting profession in Asia, Africa, continental Europe, and Latin America has led to a situation in which accounting standards have been promulgated by their individual governments. In the Anglo-American countries, on the other hand, accounting standards have been developed by the accounting profession itself.

This paper deals with the issue of regulation of financial accounting in different countries, focusing on both similarities and differences. This review is highly relevant at a time when there is growing dissatisfaction both within and without the accounting profession as to the present

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An earlier draft of this manuscript was presented at the Third Annual Congress of the European Accounting Association, Amsterdam, the Netherlands, March 24-26, 1980.

processes for formulating accounting standards. With the increasing likelihood that governmental jurisdiction over accounting standards will increase, the topic becomes especially important. This paper will examine the financial regulations in Brazil, France, Germany, Japan, the Netherlands, Switzerland, the United Kingdom, and the United States.

FINANCIAL REGULATION IN BRAZIL

Accounting practices in Brazil are basically those prescribed by the Commercial Code, the Corporation Law of December 15, 1976, regulations of the Central Bank, and tax law. This is consistent with the practice in continental Europe (such as France and Germany) in which governmental regulations play a significant role in accounting matters because of the comparatively small size of the accounting profession in those countries. The Brazilian Institute of Independent Auditors, in fact, plays a minor role in establishing accounting standards and procedures in the country.

Legal Requirements for Financial Reporting

A corporation, sociedade anônima, is governed by Corporation Law No. 6404 of December 15, 1976. This law, which establishes the requirements for all corporations and groups of companies, requires the preparation of the income statement, the statement of changes in financial position, and the balance sheet. In addition, it requires the preparation of consolidated statements for groups of companies and the use of the equity method for nonconsolidated subsidiaries. These annual financial statements must comply with the rules established by the Securities Commission and must be audited by independent auditors registered with this commission.

It is interesting to note that the 1976 Corporation Law requires that stockholders' equity accounts, long-term investments, deferred charges, and property, and plant and equipment be adjusted at the end of each accounting period, using a price index compiled by the government. The difference between the original and adjusted value of all of these accounts is assigned to an income statement account called "monetary correction." However, if an inflation gain has resulted due to this adjustment, the law requires that this gain be assigned to a capital account called "reserve for unrealized profits." In addition, corporations are encouraged to revalue their assets at the end of each accounting period based on the market values, with the contra account being

a stockholders' equity account called "revaluation reserves." Depreciation, in this case, would be based on the new value.

FINANCIAL REGULATION IN FRANCE

Financial accounting in France is greatly influenced by legislation due mainly to the determination of the French government to obtain data for social accounting purposes. To underscore this policy, French tax law permits the deductibility of expenses only if they are included in the financial statements of enterprises. In addition, the 1947 Plan Comptable Général (Uniform Chart of Accounts) which has been adopted by virtually all enterprises in the country contains a detailed chart of accounts and a series of model financial and statistical reports needed for micro- and macroaccounting purposes.

Legal Requirements for Financial Reporting

The first comprehensive effort to regulate accounting in France came in 1947 with the introduction of the Plan Comptable Général by the National Council of Accountancy's Plan Comptable Général which specifies accounting definitions, standards, procedures, and forms of financial statements. It was later revised to respond to the changing needs of the society.

A French corporation, Société Anonyme (S.A.) or Société á responsabilité limitée (SARL), is governed by provisions of the Law on Commercial Companies of July 24, 1966, as modified March 23, 1967. Under the 1966 law, report by management on the activities of the company, a trading account, a profit and loss account, and a balance sheet should be prepared at the end of each accounting period. Consolidated financial statements are not required to be published by corporations. The 1967 law further requires that financial statements be submitted to the auditors of the corporation.

The 1966 law regulates the appointment and the responsibilities of auditors. Under this law, corporations which issue stock to the public or which have capital exceeding F5,000,000 must have at least one statutory auditor. In their report, auditors must attest to the legality and fairness of financial statements and management reports for each accounting period.

The Accounting Profession

The accounting profession in France has been actively involved in the preparation of legislation related to accounting matters. This may

explain the reason for the readiness of the accounting profession to adopt accounting legislation. Therefore, the accounting standards and procedures adopted in France are those prescribed by the French Plan, the tax decree of October 28, 1965, the law of July 24, 1966, the law of March 23, 1967, and the Finance Acts of 1977 and 1978. Professional institutes, however, have continued to issue numerous recommendations on proper accounting guidelines to implement and to revise the Plan Comptable Général and tax laws. The National Association of Certified Accountants and the National Council of Accountancy, for example, have issued many opinions and guidelines dealing with different aspects of accounting.

The conservatism doctrine appears to prevail among the accounting profession in France, partly due to the fact that officers of a corporation can be held legally liable for the failure of the organization to generate profits. This may also explain the reason behind the popularity of hidden reserves in the country.

Recently, the French government has attempted to deal with the problem of inflation by issuing the Finance Acts of 1977 and 1978. These laws have mandated the use of current-value accounting for listed companies with fiscal years ended after December 1977. The Finance Acts also called for having primary financial statements of listed companies report all assets based on current replacement cost. However, this replacement cost cannot exceed the net book value multiplied by an official coefficient. A revaluation account would be established for the adjustment of all assets, and this account would be reported within the stockholders' equity of the balance sheet.

FINANCIAL REGULATION IN GERMANY

Accounting in Germany, as in France, is influenced to a great degree by legislation. In fact, most accounting standards and procedures applied in Germany are prescribed by law. Sources of accounting regulation can be found in the Commercial Code (Handelsgesetz), the Corporation Act (Aktiengesetz), the Limited Liability Company Act (Gmb H Gesetz), the Publicity Law (Publizitatsgesetz), the Cooperatives Act (Genossenschaftsgesetz), and other laws related to specific types of businesses.

Legal Requirements for Financial Reporting

The Commercial Code requires business entities (1) to maintain books of accounts in accordance with the "principles of proper bookkeeping";

(2) to prepare annual financial statements; and (3) to retain the company's books and correspondence for a specific period of time. Sections 149 and 151 to 159 of the Corporation Act of 1965, on the other hand, define the accounting standards and procedures to be utilized in the preparation of financial statements. Furthermore, the Publicity Law requires businesses, on three consecutive year-end dates, with total assets exceeding DM125 million and annual sales of more than DM250 million to publish their financial statements. These statements include the profit and loss statement and the balance sheet, accompanied with a report from management on the activities of the company. An average annual number of employees of over 5,000 individuals may substitute for one of these two conditions. However, it should be noted that the European Economic Community's Fourth Directive adopted in July 1978 requires that businesses which exceed the limits of two of the three criteria on the balance-sheet dates are obligated to publish their audited financial statements. These criteria are (1) balance-sheet totals more than DM2.6 million; (2) net sales more than DM5.2 million; and (3) an average number of more than fifty employees during the fiscal year. A corporation (A.G.) is further required under sections 331 and 332 of the 1965 Corporation Act to publish consolidated statements if the management of the A.G. has control over the operations of other companies and owns more than 50 percent of their common stock. These consolidated statements are generally limited to domestic subsidiaries, however.

The annual financial statements, together with explanatory notes to these statements, and the management report of an A.G. are prepared and submitted to the company's statutory independent public accountant (Wirtschaftsprüfer) for examination. An A.G. may have one or more auditors elected by the stockholders at their annual meeting. The report of the auditors should disclose whether financial statements are prepared in accordance with the provisions of the law and whether management's report helps to give a true picture of the company's affairs.

The Accounting Profession

Over the years, the accounting profession in Germany has developed "principles of proper bookkeeping" (Grundsaetze ordnungsmaessiger Buchfuehrung). These standards, however, are not equivalent to the "generally accepted accounting principles" in the United States, since German accounting practitioners are more concerned with complying

with the different laws prescribing accounting standards and procedures than with developing proper accounting standards and procedures. In other words, in Germany "generally accepted accounting standards" represent those standards which are detailed by law.

Extreme conservatism in valuation of assets and in determining income is permitted in Germany. For example, the establishment of secret or hidden reserves by limited liability companies, charging excess depreciation, and assigning lower values for current assets are encouraged by law to protect creditors. In addition, accounting practitioners tend to put more emphasis on form than on substance of financial statements because accounting is virtually legislated in the country.

FINANCIAL REGULATION IN JAPAN

Accounting in Japan is regulated by the German-patterned Commercial Code of 1890 (as amended in September 1974), the U.S.-patterned Securities Exchange Act of 1948, and the Comprehensive Regulations for Preparing Financial Statements of 1950. In addition, tax laws in Japan have influenced accounting practices to a great degree (for example, the calculation of depreciation charges, allowance for doubtful accounts, and estimated liability for warranty expense).

Legal Requirements for Financial Reporting

The "business accounting principles" were officially introduced in Japan in 1949 by the Economic Stabilization Board. Under these regulations, Japanese corporations should maintain proper books of accounts and prepare the profit and loss statement, the balance sheet, and many other supplementary schedules at the end of each accounting period. In addition, since April 1, 1977, all listed corporations in the country have been required to prepare consolidated financial statements. The use of the equity method of accounting for carrying the investment account on the books of the parent company, however, is optional.

Article 32 of the Commercial Code, as amended by the Ministry of Finance Regulation No. 54 of September 23, 1974, attempts to ensure that "fair and just accounting conventions shall be taken into consideration in interpretation of provisions concerning the preparation of accounting books." This code requires that all business entities maintain a double-entry bookkeeping system, with a general ledger and subledgers. All listed companies must additionally file their annual audited financial statements with the Ministry of Finance.

Under the Commercial Code, a public company (Kabushika Kaisha Yugen Kaisha) is required to have a statutory auditor elected by stockholders in the general meeting. The auditor, who is not required to be a professional accountant, acts as a watchdog, examining the financial statements of the company and reporting any violations of the law and/or of the articles of incorporation to the directors of the company. In addition, under the 1976 Law Concerning Special Exceptions to the Commercial Code Relating to Audit, companies with a capital of ¥1 billion or more, companies listed on the Japanese stock exchanges, and companies making specific public distribution of their shares are all required to have independent public accountants (professionals appointed by the board of directors).

The Certified Public Accountants Law of 1948 states that independent accountants in Japan should be either sole practitioners or audit corporations (Kansa hojia). Audit partnerships are not allowed in the country. This independent auditor cannot serve also as the company's statutory auditor.

The Accounting Profession

The Japanese Ministry of Finance exercises a tremendous control over the accounting profession in the country. Its authority extends to setting the accounting standards to be followed by the accounting profession through the publication of *Business Accounting Principles and Auditing Standards*. Furthermore, this ministry can even establish a fee structure binding on all independent auditors.

The Certified Public Accountants Law of 1948 established the foundation for the Japanese Institute of Certified Public Accountants. This Institute has been mainly involved in setting the professional qualifications for CPAs. In addition, the Institute has issued statements, "Notes," on auditing procedures and rules of conduct for the profession.

Overconservatism is often practiced by the accounting profession in Japan. This can be seen, for example, in the excessive charges for depreciation, for "inventory price fluctuation reserves," and for allowances for doubtful accounts. These charges are normally allowed for tax purposes.

FINANCIAL REGULATION IN THE NETHERLANDS

Accounting practices in the Netherlands are not influenced by legislation since there is no legislation in the country which specifies account-

ing standards and procedures to be utilized by business entities. The Commercial Code (Wetboeck van Koophandel) merely requires that proper books of accounts should be maintained by all enterprises and that accounting should be based on "sound business practice." In addition, the Financial Statements Act of 1970 (Wet op de Jaarrekening van Ondernemingen) provides the requirements for the preparation of financial statements at the end of each accounting period. Furthermore, under the 1970 act, a parent company may prepare consolidated financial statements. The lack of specific legislation regulating accounting standards permits the accounting profession in the country a greater degree of flexibility in developing sound accounting standards.

Legal Requirements for Financial Reporting

There are two types of legal forms for a corporation in the Netherlands, namely the public limited liability company (Naamloze Vennootschap, abbreviated N.V.) and the private limited liability company (Besloten Vennootschap, abbreviated B.V.). These two forms for a corporation are similar to those existing in other European countries, such as France and Germany. Under the Commercial Code, each N.V. and B.V. is required to prepare a profit and loss statement and a balance sheet at the end of its accounting period. In addition, Article 2 of the Financial Statements Act of 1970 requires that

> the financial statements provide such information that a sound judgment can be formed on the financial position and the results of operations and, to the extent to which financial statements permit, on its solvency and liquidation.

Furthermore, Article 5 of this act indicates that "the bases underlying the valuation of the assets and liabilities and the determination of the results of operations comply with standards that are regarded as being acceptable in economic and social life." The bases of valuation, therefore, can be any of the various approaches to valuation available in practice which are "acceptable in economic and social life" and which assist the readers of financial statements to make "a sound judgment" on the enterprise.

Under the Commercial Code and the Financial Statements Act of 1970, all N.V.s (excluding subsidiaries of Dutch companies included in the report of another corporation and meeting specific conditions) and certain B.V.s (for example, those with capital stock of more than f500,000, or with total assets of more than f8,000,000 and more than 100 employees) are required to have an annual audit by professional accountants. These professional auditors must be members of the

Netherlands Institute of Registered Accountants (NIVRA) or persons permitted by the Minister of Economic Affairs to practice as auditors. The 1970 act requires auditors to disclose any noncompliance with the act in their reports.

The Accounting Profession

The passage of the Register Accountants Act, which became effective in 1963, was a cornerstone for the establishment of the NIVRA, a semi-governmental professional accounting body. The NIVRA has issued a code of ethics and auditing standards for the profession similar to those issued in the United Kingdom and the United States.

The NIVRA has been actively involved in the legislative process related to accounting. For example, it welcomed the passage of the 1970 act which specifies the series of examinations for an individual who wishes to become a registered accountant and to join the NIVRA.

Accounting in the Netherlands is closely tied to business economics, a factor which has had a major effect on the development of accounting standards in the country, and which is evident in the use of replacement value by major corporations such as Philips N.V. The use of the replacement value concept is becoming widespread in the country since it is believed that the preparation of financial statements based on this concept helps the readers to make "a sound judgment" on the enterprise. Furthermore, the NIVRA fully supports the use of this concept for financial reporting purposes, which may also explain the reason for its popularity.

FINANCIAL REGULATION IN SWITZERLAND

Accounting in Switzerland is influenced by the Code of Obligations (Obligationenrecht) and the tax laws. According to the tax laws, for example, expenses cannot be deducted for tax purposes unless they have been recorded in the accounting books, a practice consistent with that in other continental European countries. In addition, uniform accounting systems have been gradually developed for different industries in the country. These systems have proven to be flexible enough to accommodate the different needs of enterprises. Though voluntary, their use is fairly widespread, resulting in a formal standardization of accounting standards and procedures in Switzerland.

Legal Requirements for Financial Reporting

The influence of legislation on accounting is minimal. The only legislation available in Switzerland dealing with accounting and financial

reporting is the Code of Obligations which has requirements so general that they can be interpreted on a very broad basis. Under this code, companies must keep accounting books, for example, in accordance with the "character and extent" of the business, showing the financial position and results of operations of the business (Article 957). Financial statements should be prepared "completely, clearly and plainly in accordance with recognized commercial principles, so that interested parties may inform themselves as accurately as possible of the economic position of the business" (Article 959).

The Code of Obligations regulates the publicly held corporations (Aktiengesellschaft, abbreviated A.G.) and the privately held companies (Gesellschaft mit beschränkter Haftung, abbreviated GmbH). Each corporation is required to prepare a profit and loss statement and a balance sheet at the end of each accounting period. Only minimum disclosure is required in these statements and extreme conservatism is encouraged by the code (for example, formation and organization costs are expensed and charged against the revenues of the period). In addition, requirements for the preparation of consolidated financial statements and statement of changes in financial position do not exist.

A.G.s are required to have one or more statutory auditors (Kontrollstelle) elected by the stockholders at the annual general meeting. Although no professional qualifications are required for this position, statutory auditors must be able to examine financial statements to be sure that they are prepared in accordance with the valuation standards set forth in the code and the company's bylaws. Furthermore, these auditors comment on the performance of management during the accounting period. If an A.G. has capital of SFrs. 5 million or more bonds outstanding, or has invited the public to entrust money to it, its financial statements must also be examined by an independent professional accountant appointed by the board of directors (Article 723). The report of this independent auditor should be submitted to the board of directors and the statutory auditors.

The Accounting Profession

The Code of Obligations does not require auditors to have any special expertise. In spite of this, auditing is normally performed by members of the Society of Swiss Certified Accountants (Verband Schweizerischer Bücherexpaten, abbreviated VSB) who are independent professional accountants mainly organized in corporations (fiduciary companies). To become a certified accountant, a person must pass preliminary and

final examinations given by the Swiss Chamber of Fiduciary Auditors (Schweizerische Treuhand und Revisionskammer) and must meet specified experience requirements.

The VSB is a division of the Swiss Chamber of Fiduciary Auditors. This chamber publishes nonbinding recommendations regarding accounting matters. It has also issued a code of ethics and a set of auditing standards that are expected to be followed by its members. Switzerland enjoys full flexibility in regard to accounting standards and procedures.

Extreme conservatism prevails in Switzerland; only minimal disclosure is required to protect outside interests and to ensure that no overstatements of assets occur. The prevailing continental European approach involving codified minimum accounting requirements also applies in Switzerland. Corporations which voluntarily exceed these requirements frequently follow an approach similar to that found in other German-speaking countries, such as the utilization of secret reserves to protect creditors.

FINANCIAL REGULATION IN THE UNITED KINGDOM

Accounting regulation in the United Kingdom can be found in both professional pronouncements, "Statements of Standard Accounting Practice," and legislation, "Companies Acts." The former statements are prepared by the Institute of Chartered Accountants in England and Wales along with other major accounting bodies in the country and serve to supplement the requirements of the Companies Acts as to the form and content of financial statements. The provisions of these statements are mandatory on practicing accountants, and any departure from them is to be disclosed in the auditor's report. In addition, the Institute issues accounting standards to its members, "Recommendations on Accounting Principles," to guide them in practice, and these recommendations are normally followed.

Tax laws have little effect on accounting standards and procedures in the United Kingdom. In general, according to these laws, "generally accepted accounting standards" can be used as a base for determining the taxable income of a corporation.

Legal Requirements for Financial Reporting

At the present time, corporations are regulated by the Companies Acts of 1948 and 1967 which require all corporations to keep "proper books of account" containing the information necessary to give a "true

and fair view" of the company's financial affairs. In addition, each corporation is required to prepare a profit and loss account and a balance sheet at the end of each accounting period. A company which has one subsidiary or more is generally required to prepare consolidated statements.

Companies Acts mandate the appointment of a qualified auditor for each corporation. To qualify for appointment as auditors, individuals are considered for this role if they are members of one of the accounting bodies recognized by the Department of Trade for this purpose. In addition, a person may be authorized by the Department of Trade to be an auditor if it is decided that he has obtained similar qualifications outside the United Kingdom (for example, a certified public accountant from the United States qualifies under this provision). The auditors' report should state whether financial statements were prepared in conformity with the Companies Acts of 1948 and 1967 and whether they give a "true and fair view" of the company's financial position and results of operations.

The Accounting Profession

The accounting bodies whose members are qualified by the Department of Trade as auditors include (1) the Institute of Chartered Accountants in England and Wales, (2) the Institute of Chartered Accountants of Scotland, (3) the Institute of Chartered Accountants in Ireland, and (4) the Association of Certified Accountants. These four bodies, in addition to the Institute of Cost and Management Accountants, and the Chartered Institute of Public Finance and Accountancy, have formed joint committees to promote proper accounting standards (Accounting Standards Committee), to advance auditing practices (Auditing Practices Committee), and to present the views of the accounting profession (Consultative Committee of Accountancy Bodies).

The Institute of Chartered Accountants in England and Wales issues "Recommendations on Accounting Principles" to guide its members in practice. Although departure from these recommendations does not necessarily require disclosure, these recommendations usually have been applied in practice.

Accounting standards and procedures have been developed gradually in the United Kingdom due to the cooperative efforts of both the government and the accounting profession. The latter is actively involved in the preparation of governmental legislation dealing with accounting matters.

FINANCIAL REGULATION IN THE UNITED STATES

In the United States, accounting is regulated by both the accounting profession and by legislation. The American Institute of Certified Public Accountants (AICPA) and the Financial Accounting Standards Board (FASB) have been coordinating their efforts to regulate the practice of accounting in the country. This is done through the issuance of statements related to accounting and auditing standards that members of the AICPA should observe in their accounting practices.

The U.S. Uniform Commercial Code, on the other hand, does not contain any specific requirements for corporations to maintain accounting books. However, state laws specify minimal record-keeping requirements. In addition, the governmental Securities and Exchange Commission (SEC) has issued Regulation S-X and Accounting Series Releases specifying the form and content of financial statements of publicly held corporations. These statements include the income statement, the balance sheet, and the statement of changes in financial position. Finally, tax laws have had some effect on accounting practices in the country.

Legal Requirements for Financial Reporting

The SEC has tremendous legislative authority over the establishment of accounting standards and procedures in the United States. Under Section 19(a) of the Securities Act of 1933, the SEC can standardize accounting terminology, accounting measurement, and accounting reporting. However, the SEC has been reluctant to exercise its power fully since it believes that the accounting profession should be allowed to police itself. The SEC requires that financial statements of publicly held corporations should be prepared in accordance with "generally accepted accounting principles" adopted by the accounting profession. Furthermore, the annual financial statements, with detailed supplementary schedules, filed with the SEC should accompany the auditor's report.

The Accounting Profession

Accounting flexibility has been the official attitude of the accounting profession in the United States, as measured by the actions of the American Institute of Certified Public Accountants and the Financial Accounting Standards Board. As early as 1932, a special committee of the AICPA in a report to the New York Stock Exchange took the following position:

> In considering ways of improving the existing situation two alternatives suggest themselves. The first is the selection by competent authority out of the body of acceptable methods in vogue today of detailed sets of rules which would become binding on all corporations of a given class. . . . The arguments against any attempt to apply this alternative to industrial corporations generally are, however, overwhelming.
>
> The more practicable alternative would be to leave every corporation free to choose its own methods of accounting within the very broad limits to which reference has been made, but require disclosure of the methods employed and consistency in their application from year to year.[1]

This laissez-faire approach undergirded the fifty-one Accounting Research Bulletins which were issued by the AICPA's Committee on Accounting Procedure (CAP) during the period 1939 to 1959. The 1958 report of the Special Committee on Research Program of the AICPA emphasized the need "to narrow the areas of difference and inconsistency in practice." This report was an indictment of the pragmatic approach of the CAP and called for a new policy vehicle that would take a more theoretical approach, that is, the Accounting Principles Board (APB).

The APB was established in 1959 to replace the CAP. This move signaled a change in the direction of the AICPA in its approach to developing accounting standards. In contrast to the CAP, the APB attempted to increase the use of the deductive approach in developing accounting standards. During the period from 1959 to 1973, the APB focused on specific problems and topics as did its predecessor and generally appeared to be unwilling and unable *to narrow the areas of difference and inconsistency in practice*. The APB received continuing attack during this period from different segments of the society for its failure to cure accounting abuses.

In 1971, the accounting profession responded by appointing a Study Group on Establishment of Accounting Principles (the Wheat Committee) in order "to examine the organization and operation of the Accounting Principles Board and determine what changes are necessary to attain better results faster." As a result of the recommendations of the Wheat Committee, the Financial Accounting Standards Board was created and became fully operational in 1973. The *conceptual framework* under which it operates has been under consideration by the FASB for some time now. In the meantime, the FASB issues *statements* dealing with specific problems as was the case with the APB and CAP.

[1] American Institute of Accountants, *Audits of Corporate Accounts* (New York: AIA, 1934), p. 7.

There have always been critics of accounting flexibility. While serving as Chairman of the Securities and Exchange Commission, Carman Blough made this observation in 1937:

> An examination of hundreds of statements filed with our Commission almost leads one to the conclusion that aside from simple rules of double entry bookkeeping, there are very few principles of accounting upon which the accountants in this country are in agreement.[2]

This may explain why the SEC played a major role in accounting regulation during the 1930s and 1940s through the issuance of its Accounting Series Releases. This role was necessary because of the abuses which existed during the 1920s and 1930s. Since the late 1940s, however, the SEC has allowed the accounting profession to undertake the formation of accounting standards. In recent years, a reaction to this has led to a movement toward greater accounting regulation.

The SEC's reliance on the accounting profession to establish accounting standards and procedures may not continue because of the abuses and injustices in the accounting field. Recently, the accounting profession has been under attack from members of the Congress for failure to cure the abuses in the field. The SEC is presently under some pressure to exercise its power and to play a more active role in developing accounting regulation.

In June 1978, Congressman John E. Moss, chairman of the U.S. House Subcommittee on Oversight and Investigation, introduced legislation to establish a National Organization of Securities and Exchange Commission Accountancy. This bill would require public accounting firms to register with such an organization and to furnish it with audit reports on the financial statements filed with the SEC. The proposed legislation also gives this organization the power to discipline those accounting firms and the principals in those firms not adhering to generally accepted auditing standards. In addition, the organization will also

> Examine whether or not generally accepted accounting principles were applied with respect to the financial statements, reports, or other documents audited, particularly whether such accounting firms accept different accounting principles on different engagements for like situations and whether such differentiation was justified.[3]

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[2] Carman G. Blough, "Need for Accounting Principles," *Accounting Review* (March 1937): 31.

[3] Deloitte Haskins & Sells, "Proposed Regulation of the Profession," *The Week in Review* (16 June 1978): 2.

This bill ultimately requires the SEC to

> Review all accounting principles, whether issued before or after the date of enactment of this Act, for purposes of determining if optimum uniformity has been achieved, and in cases in which such uniformity has not been achieved, develop and issue the needed accounting principles.[4]

In an interview with the editor of Deloitte Haskins & Sells' *The Week in Review* on March 14, 1978, the chairman of the Financial Accounting Standards Board, Donald J. Kirk, stated that the FASB was striving to account for similar situations in a similar way and not to make dissimilar situations look alike. He further stated, "Comparability is high on our list of qualities that are needed for useful financial reporting and that will require a single method of accounting for similar situations."[5] Thus, it seems that the accounting profession is moving toward the adoption of an accounting model under which different accounting methods can be used for different economic facts under different circumstances. Each of these methods accurately reflects the application of an accounting standard under a specified set of facts.

CONCLUSION

Accounting practices have been regulated throughout the world by the accounting profession in some countries, by legislation in others, and by both in still others. The status of the accounting profession in a country seems to play a major role in determining the party regulating accounting. For example, the low status and the relatively small size of the accounting profession in most nations of Asia, Africa, continental Europe, and Latin America have led to a situation in which accounting standards have been established by their individual governments.

The main features of accounting in continental Europe, in general, seem to be conservatism, hidden reserves, legal reserves, and the importance of form over substance. In the Anglo-American countries, on the other hand, the emphasis is placed more on substance than on form. In actual practice, however, these countries appear to be slow in adopting those accounting standards which respond better to the needs of their societies. Accounting in Latin American countries and Japan, in general, follows the pattern found in continental European countries, although a few of these countries have adopted more progressive accounting standards.

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[4] Ibid., p. 3.

[5] Deloitte Haskins & Sells, "The Chairman Speaks," *The Week in Review* (17 March 1978): 1.

A Comparison of Various International Proposals on Inflation Accounting: A Practitioner's View

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INTRODUCTION

Unfortunately, most countries now suffer from rampant inflation. This obviously has many adverse effects. It also has one effect that many consider beneficial. It has provided a stimulus for the accounting profession in many countries, and the governments in a few countries, to develop accounting systems that recognize effects of price changes. Some systems recognize effects of changes in the prices of specific items, some effects of changes in the general level of prices, and others effects of both types of changes.

This paper summarizes and compares the methods to give an accounting recognition to the effects of changing prices that are now required or have been proposed in a number of countries throughout the world.

PRICE-LEVEL ACCOUNTING

The methods now used in the primary or basic financial statements in three countries — Argentina, Brazil, and Chile — are based on price-level or general purchasing-power or constant-dollar accounting. These methods, with certain exceptions, retain the historical cost basis of accounting and reflect effects of changes in the general level of prices.

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Argentina

For a number of years, Argentina has had a high rate of inflation, frequently in three digits. As a result, the profession has actively promoted price-level accounting for some time. In 1971, a professional organization in Argentina published a recommendation advocating the presentation of price-level adjusted financial statements. A subsequent professional pronouncement required financial statements for periods ending on or after September 30, 1976, to include price-level adjusted financial statements as supplementary information in a second column next to the unadjusted balances or in a note.

In 1979, the Argentine accounting profession issued a further pronouncement that requires price-level adjusted financial statements to be presented as the primary financial statements for periods ending on or after September 30, 1979. To comply with legal requirements, unadjusted statements, which reflect price-level or appraisal adjustments of property and depreciation accounts but not of other accounts, must be presented as supplemental information. Argentine auditors now express opinions on the price-level adjusted statements in terms of fairness in accordance with generally accepted accounting principles and on the unadjusted statements in terms of compliance with legal requirements.

The price-level adjusted financial statements are required to reflect a comprehensive restatement that adjusts nonmonetary items for the change in the purchasing power of the peso from their date of origin to the balance-sheet date and presents the gain or loss in the purchasing power of net monetary items held during the period. Alternatively, a simplified approach can be used in restating certain nonmonetary items. Under this approach,

1. Marketable securities are stated at market value at the balance-sheet date.
2. Inventories are stated at current value.
3. Property, and plant and equipment accounts are stated at the restated amounts determined for book purposes in accordance with Argentine law or at appraised amounts.
4. Investments in business enterprises over which the investor exercises significant influence are stated at amounts determined by applying the equity method to the price-level adjusted financial statements of the investees.

Companies not listed on the stock exchange or not subject to special

government regulation can follow a simplified approach in their adjusted income statements. Instead of restating individual items of income and expense and presenting the gain or loss from holding monetary items, they can present the effects of inflation in a single amount based on the change in restated net assets during the period. Any prior-period comparative financial statements presented are restated in terms of the purchasing power of the peso at the end of the current period.

Brazil

For some time, Brazilian legislation has required certain price-level adjustments to be reflected in financial statements. The method presently used in calculating the adjustments is specified in the 1976 Corporation Law, which requires three adjustments to be made.

The first restates permanent assets (which consist principally of property, plant and equipment, and long-term investments) and deferred charges based on the change during the year in a specified general price index. The second restates beginning net worth accounts based on the change in the same index. The third restates depreciation and amortization of permanent assets and deferred charges. The restatement of permanent assets is credited, and the restatements of the net worth accounts and depreciation and amortization are charged to current income.

These procedures are simple, and the results of applying them differ significantly from those obtained through comprehensive price-level adjustments only in that (1) inventory is treated as a monetary asset; and (2) no provision is made for updating prior-period financial statements.

Chile

For some years, Chilean law has required companies to restate their "invested capital" annually by applying the percentage increase in the consumer price index. The law also requires that property, and plant and equipment be restated in an amount equal to the lesser of (1) the amount by which invested capital is restated or (2) the amount determined by applying the percentage increase in the consumer price index to the property, and plant and equipment accounts. Depreciation is based on the restated amounts. If the restatement of invested capital exceeds the restatement of property, and plant and equipment, the excess or 20 percent of taxable income, whichever is less, must be charged to income.

CURRENT-COST ACCOUNTING

In a number of countries, the accounting profession has issued standards, provisional standards, and exposure drafts dealing with the supplemental disclosure of current cost-accounting information. These countries include Australia, Canada, Germany, the Netherlands, New Zealand, South Africa, and the United Kingdom.

Australia

In Australia, the profession has issued a "provisional standard" that deals with "current-cost accounting" and "strongly recommends" that listed companies and public corporations include in their financial statements the following supplemental information on a current-cost basis: current cost of fixed assets and inventories, depreciation expense, and cost of goods sold.

The principal terms of the provisional standard are the following:

1. Nonmonetary assets are to be stated at the lower of current cost (less accumulated depreciation, where applicable) and recoverable amount as of the balance-sheet date. In this regard
   a. Current cost is the lowest cost at which the asset's service potential, when the asset was first acquired by the entity, could currently be obtained by the entity in the normal course of business.
   b. Recoverable amount is the amount expected to be recovered (i) from the total net cash revenues less all relevant cash expenses from the asset's continued use and/or (ii) through its sale.
2. A restatement of the current cost of an asset is to be credited or charged directly to a special surplus account, which is referred to as the "current-cost adjustment account."
3. Cost of goods sold is to be stated at the current cost of the goods at the time of sale or, if the goods had previously been written down to their recoverable amount, at that amount.
4. Depreciation is to be reported based on the average-for-the-period of the assets' current cost or, for assets carried at recoverable amounts, on the basis of that amount.

The Australian profession has issued two exposure drafts dealing with monetary items in the context of current-cost accounting. The latest provides for reporting "profit and gearing gains attributable to shareholders" and "entity net profits." The former reflects gains and losses in the purchasing power of all monetary items as well as adjustments to state depreciation and cost of sales at current cost. The latter reverses the gain or loss in the purchasing power of "loan capital."

The exposure draft provides for computing the purchasing-power gains and losses by:

1. Applying to trade receivables and trade payables the percentage change during the period in the current cost of the inputs of goods and services that are principally responsible for the balances of trade payables and the products whose sales generate the trade receivables.
2. Applying the percentage change during the year in the general price level to the monetary items of an enterprise whose business is the lending of money.
3. Applying to loan capital the percentage change in the general price level.
4. Applying to other monetary assets and liabilities the percentage change in a price-index representative of inputs of goods and services during the period or, if this is impracticable, in a general price index.

The gain or loss in the purchasing power of all monetary assets and liabilities is to be credited or charged to income with an offsetting entry to the current-cost adjustment account. Below the caption "profit and gearing gains attributable to shareholders," the gain or loss in the purchasing power of loan capital is to be reversed and taken to a "gearing gains reserve account" included in shareholders' equity. The final caption in the income statement, "entity net profits," excludes the gain or loss on loan capital.

In March 1980, the Australian profession issued a further exposure draft that deals with the extention of current-cost accounting to nonmonetary items in addition to inventories and property. Its provisions are generally consistent with those of the provisional standard.

Canada

The Canadian Institute of Chartered Accountants issued a discussion paper on current-value accounting in 1976 and, after considering the responses to that paper, issued an exposure draft entitled "Current Cost Accounting" in December 1979. The draft proposes requiring certain enterprises to present supplementary current-cost information together with their annual historical cost financial statements. The enterprises affected are those whose securities are publicly traded and that have either (1) inventories and property, and plant and equipment (before deducting accumulated depreciation, depletion, and amortization) totalling at least $50 million or; (2) total assets of at least $350 million.

An enterprise presenting supplementary current-cost information is to present "current cost income of the enterprise" and "current cost income attributable to shareholders."

The "current cost income of the enterprise" is intended to present income after providing for the impact of specific price changes on the productive assets needed to maintain the enterprise's operating capability, whether they are financed by equity capital or debt. It is to be determined by making the following adjustments to historical cost income before deducting interest expense and income taxes.

1. A depreciation adjustment, representing the difference between depreciation for the period calculated on the current cost of property, plant and equipment, and the depreciation charged in the historical cost financial statements;
2. A cost of sales adjustment, representing the difference between the current cost, at the date of sale of goods sold during the period and the cost of goods sold charged in the historical cost financial statements;
3. A net-productive monetary-items adjustment to provide for the effect of specific price changes during the period on the net-productive monetary items required to support the operating capability of the enterprise; and
4. Any other material adjustments required to allow for the impact of specific price changes on the productive assets of the enterprise, for example, adjustments relating to disposals of items of property, and plant and equipment during the period.

The exposure draft defines current cost as the amount of cash or other consideration, measured in units of money, that would be needed to acquire an asset identical or equivalent to that owned. Acquisition might be either by purchase or production, as appropriate in the circumstances of the enterprise. The use of current cost as a measurement of an asset owned by an enterprise is subject to the restriction that:

1. In the case of assets held for sale, the measurement of the asset should not exceed net realizable value; and
2. In the case of assets held for use in the enterprise, the measurement of the asset should not exceed value in use, which is the net present value of future cash flows expected to result from the use of an asset in the enterprise and from its ultimate disposition.

The net productive monetary items with respect to which an adjustment is to be made are (1) short-term trade receivables, accruals, and prepaid expenses; (2) inventories not subject to a cost of sales adjustment; and (3) cash balances required for the conduct of day-to-day operating activities; net of (a) short-term trade payables and accruals; and (b) short-term loans required for the conduct of day-to-day operating activities.

The exposure draft states that calculation of the adjustment requires that relevant rates of price change be identified for each component of net productive monetary items. For example, the adjustment relating to receivables is to reflect changes in the current cost of goods or services sold that are attributable to changes in prices of the materials, labor, and other inputs, used to produce the goods. In many instances, changes in selling prices may provide an appropriate guide. Where payables are concerned, the adjustment is to reflect changes in the current cost of items that have been financed by those payables.

In addition to "current cost income of the enterprise," the supplementary information is to present "current cost income attributable to shareholders." This is intended to reflect the costs and benefits to the shareholders of financing a portion of the enterprise's productive assets with borrowed funds. It is determined by adjusting current-cost income of the enterprise to provide for income taxes and, when the productive assets of the enterprise are partly financed by net borrowings, to reflect the interest cost of debt, dividends on nonparticipating preferred shares, and a financing adjustment.

The financing adjustment is to reflect the realized cost or benefit to shareholders of financing productive assets with net borrowings. It is calculated by (1) determining the ratio of net borrowings to the sum of net borrowings and shareholders' equity, and (2) applying this ratio to the total of the current-cost adjustments reflected in the computation of current-cost income of the enterprise.

The exposure draft states that per share data should be presented for current-cost income attributable to the shareholders.

In addition to the income statement data, the supplementary information is to disclose the carrying value of inventory and property, and plant and equipment on a current-cost basis, compared with the corresponding net book amounts reported in the historical cost financial statements.

The exposure draft also provides for the presentation of a state-

ment of changes in shareholders' equity giving effect to the restatement of inventory and property, and plant and equipment on a current-cost basis. The statement is to disclose separately the following items:

1. The change in the amount required to maintain the operating capability of the enterprise, distinguishing amounts attributable to:
   a. An increase/decrease in the current cost of property, and plant and equipment during the period;
   b. An increase/decrease in the current cost of inventory during the period; and
   c. An increase/decrease in net productive monetary items due to specific price changes during the period;
2. The amount of the financing adjustment; and
3. Current-cost income for the period attributable to shareholders.

Germany

In 1975, the German profession issued a pronouncement recommending that certain supplementary replacement-cost information be presented in a note to annual financial statements. The information relates to assets financed by equity, and the pronouncement is based on the assumption that equity is used first to finance property, and plant and equipment, then to finance inventories, and finally to finance other assets. The information to be disclosed is (1) the excess of replacement cost over historical cost depreciation, and (2) the amount required to maintain the operating capacity of inventory.

If the amount of equity is *less* than the amount of property, and plant and equipment, the excess of replacement cost over historical cost depreciation to be reported is the total excess multiplied by the ratio of equity to property, and plant and equipment. In that event, no amount is reported with respect to inventory.

If the amount of equity exceeds the amount of property, and plant and equipment, the amount required to maintain the operating capacity of inventory is determined by applying the percentage-price increase during the year relating to items included in ending inventory to the amount of the beginning inventory. If the ratio of (1) equity less property, and plant and equipment to (2) inventory is *less* than 1.0, this ratio is applied to the amount determined by applying the percentage price increase, and the result is the amount to be disclosed.

The German government is opposed to the presentation of accounting information that recognizes effects of price changes on the basis that presenting the information may increase inflation. Thus, the

government has not supported the profession's recommendation, and relatively few companies have applied it.

The Netherlands

In the Netherlands, a commission composed of representatives from industry, the trade unions, and the accounting profession issues pronouncements on accounting matters. It has issued a recommendation that states that information that is more meaningful than historical cost is required with respect to property, and plant and equipment that has been held for a considerable length of time. The recommendation also states that more meaningful information can be provided either by revaluing the assets to current values or by disclosing current-value information in a note.

Leaders in the accounting profession generally recommend that assets, particularly depreciable fixed assets, be accounted for on the basis of replacement cost or appraised values, and a significant number of companies have adopted this basis of accounting for property, and plant and equipment.

A credit arising from a restatement of assets is generally reported in a separate reserve in the capital stock and surplus section of the balance sheet. Because the excess of depreciation based on replacement cost over depreciation based on original cost is not deductible for tax purposes, the reserve for revaluation is often recorded on a net-of-tax basis. A number of companies that state their property accounts at replacement cost also state their inventories on this basis.

New Zealand

In New Zealand, the accounting profession has issued a pronouncement that requires all listed companies to present a supplemental balance sheet and profit and loss account on a current-cost basis.

In the supplemental balance sheet, all nonmonetary assets are to be stated at their value to the business. The pronouncement states that the value to the business of an asset whose loss would materially impair the operating capability of the business is replacement cost less, where applicable, depreciation. The value to the business of an asset whose loss would not materially impair its operating capability is net realizable value.

The supplemental profit and loss account presents two measures of profitability: the "current cost operating profit of the enterprise" and the "profit attributable to the owners."

In arriving at the "current cost operating profit of the enterprise," the following principles are to be applied.

1. Depreciation is based on the current replacement cost of the related assets;
2. Cost of sales is based on the current cost of inventory at the time it is sold or consumed;
3. An adjustment is made to reflect the change in the purchasing power of "circulating monetary assets"; and
4. Interest on borrowed funds is *not* taken into consideration.

The circulating monetary assets of an enterprise are those monetary assets that must be maintained in order to service the production and selling activities in which the enterprise is engaged. These include cash (including deposits for a fixed term of up to twelve months), trade accounts receivable, installment receivables, notes receivable, refundable deposits paid, and contract work in process under fixed price contracts.

The adjustment to reflect the change in the purchasing power of circulating monetary assets is computed by multiplying the period's average investment in circulating monetary assets by the period's change in the general price index for the country.

The "profit attributable to the owners" is calculated by adjusting the "current cost operating profit of the enterprise" for the following items: (1) interest on borrowed funds; (2) the change in the value of those nonmonetary assets financed by borrowings; and (3) the change in the purchasing power of those circulating monetary assets financed by borrowing.

The change in the value of those nonmonetary assets financed by borrowings is calculated by multiplying the amount by which nonmonetary assets were revalued during the period by the ratio of average borrowings to average total assets during the period. Likewise, the change in the purchasing power of those circulating monetary assets that are financed by borrowings is calculated by multiplying the adjustment to reflect the change in the purchasing power of circulating monetary assets during the period by the ratio of average borrowings to average total assets during the period.

South Africa

In 1978, the profession in South Africa issued a guideline advocating the presentation of a supplemental current-cost income statement in which (1) depreciation is based on the current value to the business

of its depreciable assets; (2) cost of sales is based on current value to the business of inventory on the date of sale; (3) a gain or loss on the disposition of a depreciable asset is based on its depreciated current cost; and (4) a gearing adjustment is reported.

The guideline states that the value to the business of a depreciable asset is the current cost that would have to be incurred to obtain and install an equivalent asset unless the asset will not be replaced upon the expiration of its useful life or it is no longer being used. If an asset will not be replaced, its value to the business is the higher of its recoverable amount and net realizable value; if an asset is no longer being used, its value to the business is net realizable value. The value to the business of inventory is the lower of current-cost and net realizable value.

If monetary assets exceed monetary liabilities, the gearing adjustment is computed by multiplying the average net monetary asset position by an index representative of the change in the price of the company's inputs.

If monetary liabilities exceed monetary assets, the gearing adjustment is computed by multiplying the sum of the difference between depreciation, cost of sales, and gains and losses on the disposition of depreciable assets on a current-cost basis and those amounts on the historical cost basis by the ratio of net monetary liabilities to the sum of net monetary liabilities, equity, deferred tax balances, and notes payable convertible into shares.

United Kingdom

More time has probably been spent on developing a system of inflation accounting in the United Kingdom than in any other country. In January 1973, the profession issued its first exposure draft on the subject, which proposed a system of general purchasing-power accounting. Following the publication of the Sandilands Report in 1975, the U.K. profession switched to current-cost accounting and issued a standard on the subject in March 1980, which is effective for years beginning after December 31, 1979.

The current-cost accounting standard applies to entities whose securities are listed on The Stock Exchange and to other entities that meet a size test. However, certain entities, including insurance companies and property investment companies, are exempted.

Affected enterprises are required to present a current-cost profit and loss account and balance sheet. This requirement can be complied with in any of three ways:

1. By presenting historical cost financial statements as the primary statements and supplementary current-cost statements;
2. By presenting current-cost financial statements as the primary statements and supplementary historical cost statements; or
3. By presenting current-cost financial statements as the only statements accompanied by adequate historical cost information.

The concept of value underlying the standard is value to the business which ordinarily is the net current cost of a replacement asset that has a similar useful output or service capacity as that of the existing asset when it was acquired. However, if a permanent diminution to a lower value has been recognized, the value to the business of an asset is the greater of its net realizable value and, if applicable, the amount recoverable from its further use.

The current-cost profit and loss account is to present two measures of profitability: the "current-cost operating profit" and the "current-cost profit attributable to the shareholders." The "current-cost operating profit" is stated before interest on net borrowings and income taxes and is to reflect three adjustments to the amounts reported on the historical cost basis.

1. The first adjusts depreciation to reflect the value to the business of depreciable assets consumed during the period.
2. The second adjusts cost of sales to the value to the business of inventory sold or consumed during the period.
3. The third is a monetary working capital adjustment.

Monetary working capital is defined as the aggregate of trade accounts and notes receivable, prepayments, and inventories not subject to the cost of sales adjustment less trade accounts and notes payable and accruals. That part of bank balances or overdrafts that fluctuates with the volume of these items as well as any cash floats required to support day-to-day operations of the business are to be included in monetary working capital if the effect of their inclusion on the "current-cost operating profit" is material.

The monetary working capital adjustment is to be computed by applying to each element of the monetary working capital the change in a relevant price index. The index for receivables should reflect the current cost of input costs applicable to the goods and services sold. The index for payables should reflect the cost of items financed by the payables.

"Current-cost profit attributable to shareholders" is determined

after interest, income taxes, extraordinary items, and a gearing adjustment. The gearing adjustment is determined by multiplying the aggregate of the three adjustments reflected in "current-cost operating profit" by the ratio of net borrowings to net operating assets. Net borrowings are defined as the excess of:

the aggregate of all liabilities and provisions fixed in monetary terms (including convertible debentures and deferred tax but excluding proposed dividends) other than those included within monetary working capital and other than those that are, in substance, equity capital

over

the aggregate of all current assets other than those subject to a cost of sales adjustment and those included within monetary working capital.

Listed companies are required to disclose earnings per share based on the current-cost profit attributable to equity shareholders.

In the current-cost balance sheet, the following principles should be applied.

1. Property, and plant and equipment, and inventories are to be stated at their value to the business.
2. Investments to which the equity method applies are to be stated at equity in net assets stated on the current-cost basis or at the directors' best estimate thereof.
3. Other investments are to be stated at the directors' valuation.
4. Intangible assets other than goodwill are to be stated at the best estimate of their value to the business.
5. Goodwill is to be stated at the amount reported on the historical cost basis less any amount included therein that represents an excess of the value to the business over the historical cost of identifiable assets held by a subsidiary at the date of its acquisition.
6. Current assets not subject to the cost of sales adjustment and all liabilities are to be stated on the historical cost basis.

HYBRID METHODS

What might be referred to as hybrid methods of accounting for effects of price changes, because they combine features of both price-level and current-cost accounting, are now in effect in Mexico and the United States.

Mexico

The profession in Mexico issued an exposure draft on inflation account-

ing in November 1978 and a final statement in February 1980. This statement applies to all enterprises other than financial institutions, insurance companies, and not-for-profit entities. It is effective for years beginning after December 31, 1979.

The statement provides for the annual restatements of inventories; property, and plant and equipment; cost of sales; and depreciation expense. These restatements may be based on either current specific prices or the change in the consumer price index. If specific prices are used, they ordinarily are to be based on the replacement cost of inventory items and appraisals of property, and plant and equipment.

The statement permits the restatement of property, plant and equipment, and depreciation either to be recorded in the books and reflected in the basic financial statements or to be disclosed in a note or appendix to the statements. The restatement of inventories and cost of sales is to be disclosed in a note or appendix to the statements.

A statement of price-level adjusted shareholders' equity is to be included in the note or appendix. This is to report income for the period after the depreciation and cost of sales adjustments and the gain or loss during the period in the purchasing power of net monetary items.

Those companies using specific prices to restate nonmonetary assets are to compare the amount of the restatement with the amount computed by applying the change in the consumer price index to the nonmonetary assets. The difference is to be reported in the statement of price-level adjusted shareholders' equity as the gain or loss from holding nonmonetary assets.

United States

Inflation accounting has been discussed in the United States for at least thirty years. Finally, on December 25, 1979, the effective date of Statement of Financial Accounting Standards No. 33, inflation accounting became part of the reporting requirements applicable to certain large, publicly held companies.

These companies must disclose certain effects of changing prices as supplementary information to their basic financial statements. SFAS No. 33 requires each affected enterprise to report, for fiscal periods ending after December 25, 1979, income from continuing operations adjusted for changes in the general price level (that is, on the historical cost/constant dollar basis) and the purchasing-power gain (or loss) on net monetary items. The statement also requires disclosure of in-

come from continuing operations measured using the current cost of inventories and property, plant and equipment, and the net increases (decreases) in the current costs of inventories and property, plant and equipment, and the amount of that increase (decrease) due to changes in the general price level. However, these current-cost amounts do not have to be reported until 1980 reports are issued.

Each affected company also must report a five-year summary of the following information stated in either the average of current-year constant dollars or dollars of the base year for the Consumer Price Index for All Urban Consumers.

1. Net sales and other operating revenues;
2. Income, including per share amounts, from continuing operations calculated on both historical cost/constant dollar and current-cost bases;
3. Purchasing-power gain or loss on net monetary items;
4. Net assets at fiscal year end at both current-cost and historical cost/constant dollar amounts;
5. Net increases (decreases) in the current-cost amounts of inventory and property, and plant and equipment, net of general price inflation;
6. Cash dividends per common share; and
7. Market price per common share at year end.

These disclosure requirements apply to public companies that have either (1) inventories and property, and plant and equipment before deducting accumulated depreciation, depletion, and amortization of more than $125 million, or (2) total assets net of accumulated depreciation, depletion, and amortization of more than $1 billion.

SFAS No. 33 imposes a limit on the amount at which assets are to be stated on both the historical cost/constant dollar and the current-cost bases. Amounts reported on these bases are not to exceed the assets' "recoverable amount," defined as the current worth of the net amount of cash expected to be recoverable from the use or sale of the assets. The statement provides that recoverable amounts may be taken to be net realizable value in the case of an asset that is about to be sold and value in use in the case of other assets. Value in use is the net present value of future cash flows (including the ultimate proceeds of disposal) expected to be derived from the use of an asset by the enterprise. "Recoverable amount" is calculated for asset groups (except in the case of an asset used independently of other assets) and need not be calculated unless it is judged to be materially and permanently

below historical cost/constant dollars or current cost. If used, recoverable amount replaces historical cost/constant dollars and/or current cost in calculating the supplemental disclosures.

SFAS No. 33 does not require a comprehensive adjustment of all financial statement items to compute either historical cost/constant dollar or current-cost income from continuing operations although comprehensive restatement is permitted. SFAS No. 33 requires only cost of goods sold and depreciation, depletion, and amortization to be adjusted. Revenues, other operating expenses, and income taxes are assumed to be stated in amounts that are not materially different from current cost and constant dollars.

SFAS No. 33 differs significantly from the pronouncements issued in other countries in that it does not come to a bottom line. The purchasing-power gain or loss on net monetary items, the amount of the increase/decrease in the current costs of inventories and property, plant and equipment, and income from continuing operations are not required to be totalled.

INTERNATIONAL ACCOUNTING STANDARDS COMMITTEE

The International Accounting Standards Committee has taken an active interest in accounting for changing prices. In June 1977, it issued International Accounting Standard No. 6 which states:

> In complying with International Accounting Standard 1, Disclosure of Accounting Policies, enterprises should present in their financial statements information that describes the procedures adopted to reflect the impact on the financial statements of specific price changes, changes in the general level of prices, or of both. If no such procedures have been adopted that fact should be disclosed.

At its March 1980 meeting, the IASC approved the publication of an exposure draft of a possible replacement of International Accounting Standard No. 6. When published, this exposure draft will state that large enterprises whose securities are publicly traded should present supplementary information that adjusts cost of sales and depreciation for the effect of changing prices. It will leave the door open to the presentation of a financing or gearing adjustment.

COMPARISON OF METHODS

The methods of accounting for price changes that are presently in effect or being considered in twelve countries have now been reviewed. In what respects are these various methods similar? How do they

differ? Focusing on a few key factors will facilitate a comparison of the various methods. These factors are listed below.

1. Is inflation accounting incorporated into the primary financial statements or presented as supplementary information?
2. What companies are to report inflation accounting information?
3. How are inventories, property, and plant and equipment stated?
4. What balance-sheet information is presented?
5. What concept of capital maintenance is implied?

Location of Information

It is interesting to note that in the three countries — Argentina, Brazil, and Chile — in which some variation of historical cost/constant dollar accounting is applied, inflation accounting is incorporated into the primary financial statements. On the other hand, in the countries using a current-cost or hybrid method, inflation accounting is presented as supplementary information, except in Mexico where it may be partially reported in the primary statements and in the Netherlands and the United Kingdom where it may be reported either in the primary statements or as supplementary information. Several years ago, the professions in Australia and the United Kingdom had contemplated a mandatory early incorporation of current-cost accounting into primary financial statements. This proved not to be feasible. It is also interesting that, of the countries reviewed, the three with the highest inflation rates are those using some variation of historical cost/constant dollar accounting.

One may conclude that with extreme inflation, historical cost/nominal dollar accounting becomes meaningless and price-level adjustments must be incorporated into the primary financial statements. However, because of resistance to change, a considerable period of time will be needed before current-cost accounting is likely to be required to be incorporated into primary financial statements.

Applicability of Requirements

In the countries in which some variation of historical cost/constant dollar accounting is used, all enterprises must follow the prescribed method. In the three current-cost countries in which compliance with the profession's suggestion regarding current-cost accounting is not mandatory — Germany, the Netherlands, and South Africa — those suggestions apply to all enterprises. In the other countries, the relevant pronouncements apply to only certain enterprises, such as large com-

panies with publicly traded securities, or all listed companies, or all listed and certain other companies.

The limitations on the applicability of the relevant pronouncements presumably are based on cost/benefit considerations. The countries in which applicability is limited are countries in which the required information is or may be presented as supplementary information. It would not be logical to limit a requirement to incorporate current-cost accounting into primary financial statements to only some companies. Thus, cost/benefit considerations are likely to impede the incorporation of current-cost accounting into primary statements.

Valuation of Inventories and Property, and Plant and Equipment

Considerable variety exists with respect to the valuation of inventories, property, and plant and equipment in the three countries in which some variation of historical cost/constant dollar accounting is applied. In Argentina, both are stated at historical cost expressed in pesos of current purchasing power. In Brazil, property, and plant and equipment are stated on this basis while inventory is stated at historical cost in nominal cruzeiros. In Chile, property, and plant and equipment (to the extent they do not exceed equity) are stated at historical cost expressed in escudos of current purchasing power, while other property and inventories are stated at historical cost in nominal escudos.

There is more similarity with respect to the valuation of inventories and property, and plant and equipment among the various methods of current-cost accounting. The methods all focus on the current reproduction cost of existing assets. Most also provide for using some measure of recoverable amount when it is less than current cost. One difference in this regard is that when the recoverable amount is based on the future cash flows from the use and eventual disposition of an asset, the cash flows are to be discounted to their present value in Canada and the United States, but not in Australia, South Africa, or the United Kingdom. Particularly in view of today's interest rates, discounting appears to be required to produce meaningful amounts.

Balance-Sheet Information

In general, greater attention has been given to income-statement than to balance-sheet effects of price changes. Full balance sheets in which at least some assets are stated at amounts that reflect effects of price changes are provided for in the three countries using a system of historical cost/constant dollar accounting and in the Netherlands, New Zealand, and the United Kingdom. Disclosure of the current cost of

property, plant and equipment, and inventories is provided for in Australia, Canada, Mexico, and the United States. The pronouncements in Germany and South Africa do not mention balance-sheet data.

Just as presentations of the results of operations that reflect effects of price changes often differ significantly from those that do not, presentations of financial position that reflect effects of price changes often differ significantly from those that do not. Restated balance sheets as well as restated income statements are needed to inform users of the statements of the impact of price changes on a business entity.

Capital Maintenance

The aspect of accounting for price changes that has been the most controversial has been which concept of capital maintenance to use and the related treatment of monetary items.

The concept underlying the systems of historical cost/constant dollar accounting being applied in Argentina, Brazil, and Chile is financial capital measured in units of constant purchasing power. That concept is consistent with the disclosures required in Mexico and by SFAS No. 33 in the United States. However, the FASB has avoided taking a position on the capital maintenance issue by not including a "bottom line" as part of its disclosures.

The concept of capital maintenance underlying the current-cost accounting systems in other countries is physical capital or operating capacity. However, considerable variations exist among countries on how this concept is applied:

1. In the Netherlands, the physical capital of an entity appears to be considered to be its property, and plant and equipment plus, perhaps, its inventory, regardless of how those assets are financed.
2. In Germany, the physical capital of an entity appears to be its property, plant and equipment, and inventory financed by equity; monetary items — including any financed by equity — are ignored.
3. In South Africa, the operating capacity of an entity appears to be its property, plant and equipment, and inventory financed by equity plus the purchasing power of any net monetary asset position financed by equity.
4. In Australia, Canada, New Zealand, and the United Kingdom, two measures of profitability are to be disclosed. The concept of capital to be maintained for the purpose of computing an entity's operating profit is the aggregate of the physical assets included in property, plant

and equipment, and inventories plus the purchasing power of circulating monetary assets or of net monetary working capital, regardless of how they are financed. Income attributable to the shareholders then reflects a gearing gain. In Australia, the gearing gain equals the decline in the purchasing power of loan capital. In New Zealand, it equals the increase in the value of nonmonetary assets financed by borrowings. In Canada and the United Kingdom, it equals the proportion of the current-cost adjustments for depreciation, cost of sales, and monetary working capital applicable to items financed by borrowings.

This author believes that the standard setters need to reconsider their conclusions regarding capital maintenance. Many of the existing pronouncements do not clearly articulate the concept to be applied but rather concentrate on explaining the mechanics of computing adjustments for gearing gains.

CONCLUSION

In most countries in which they exist, accounting systems that recognize effects of price changes have just recently been or are yet to be implemented. Thus, users of financial statements have yet to assess the utility of the information provided by these systems. A clear picture of the future of inflation accounting will become apparent only after users obtain experience with this information. Nevertheless, this author expects that the information will prove to be worthwhile and, unless inflation abates, will become a progressively more important part of financial reporting.

Primary-Secondary Reporting: A Cross-Cultural Analysis

FREDERICK D. S. CHOI*

Financial managers of multinational enterprises have been innovative in tapping the savings of transnational investor groups.[1] In addition to selling debt and equity securities in both national and international capital markets, many companies have listed their shares on foreign stock exchanges as a prelude to future financing. The international distribution of corporate securities has, in turn, confronted both financial managers and accountants alike with reporting problems of no small proportion. For one thing, foreign readers reside and operate in socioeconomic environments which differ from that of the reporting company. Accordingly, standards of comparison and choice criteria may vary from country to country. Foreign readers are also accustomed to analyzing and interpreting financial statements in the context of their own national set of accounting and reporting norms. Under these circumstances, the challenge of transnational financial reporting lies in "conveying to a foreign reader the same message as would be received by a domestic reader."[2]

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[1] For example, see A. Middernacht, "The Development of Euromarket Borrowing Instruments," *Euromoney* (April 1975): 42.

[2] Gerhard G. Mueller and Lauren M. Walker, "The Coming Age of Transnational Financial Reporting," *Journal of Accountancy* (July 1978); reprinted in Frederick D. S. Choi and Gerhard G. Mueller, *Essentials of Multinational Accounting: An Anthology* (Ann Arbor, Mich.: University Microfilms International, 1979), p. 82.

This paper examines a proposed reporting framework that is currently being courted as the optimal solution to the transnational reporting problem. The proposal in question was originally advocated by the Accountants International Study Group (AISG) and recommends that multiple sets of statements, primary and secondary, be prepared for a firm with audiences of interest in more than one country.[3] The evidence presented here suggests that, contrary to the proposal's original intent, primary-secondary reporting has the potential to mislead rather than improve the communication of financial information to foreign audiences of interest.

COMMUNICATION — AN INTEGRAL FEATURE OF THE ACCOUNTING PROCESS

Accounting may be broadly defined as a measurement and communication process. Bedford conceptualizes this process as consisting of four procedural steps[4]:

1. *Perception* of the significant activity of the accounting entity or in the environment in which the entity performs. Implicit in the traditional perception is the belief that financial transactions represent the significant activities.
2. *Symbolizing* the perceived activities in such a fashion that a data base of the activities is available that can then be analyzed to grasp an understanding of the interrelationships of the mass of perceived activities. Conventionally, this symbolization has taken the form of recordings in accounts, journals, and ledgers using well-established bookkeeping and measurement procedures.
3. *Analysis* of the model of activities in order to summarize, organize, and lay bare the interrelationships among activities and to provide a status picture or map of the entity. Traditionally, this analysis process has been viewed as one of developing accounting reports to provide insights into the nature of entity activities.
4. *Communication* (transmission) of the analysis to users of the accounting product to guide decision makers in directing future activities of the entity or in changing their relationship with the entity.

This operational conception views accounting information as symbolic representations of entity related activities. Thus, in examining

[3] Accountants International Study Group, "International Financial Reporting," Study No. 11 (Toronto, Canada: AISG, 1975).
[4] Norton M. Bedford, *Extensions in Accounting Disclosure* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973), p. 5.

the outputs of the accounting process from the perspective of the foreign reader, we must examine (1) the adequacy of the scope of accounting perceptions, (2) the efficiency of the symbolization process, (3) the extent of available analytical constraints, and (4) the effectiveness of the communication. This paper concentrates on the latter.

Since accounting information relies heavily on symbolic representation of enterprise activities, effective communication of these activities abroad requires that the message sender (accountant) and the message receiver (foreign reader) have a common understanding of the meaning of accounting symbols.[5] For example, the symbol *net income* may represent to the accountant the difference between revenues realized and expenses incurred during an accounting period. If a foreign reader thinks the symbol indicates the difference between a firm's cash receipts and disbursements, the communication will be defective. The image in the mind of the accountant will not be transmitted to the foreign reader.

A more subtle communication problem occurs when a given symbol may assume different meanings in different cultural contexts. For example, dividend payments may be discretionary in one country but obligatory in another, or they may be paid from consolidated versus parent-company earnings. The financial significance of the term *dividends* will, therefore, vary between cultures even if the dividend rate is identical in both.

Differences in measurement rules also affect the meaning of accounting symbols. Thus, equipment valued at current replacement cost does not have the same meaning as equipment valued at original acquisition cost. Similarly, accrued taxes that do not consider tax deferrals are not the same as accrued taxes that do. Different language and currency denominations have the potential to distort transnational communications as well.

The extent of reader confusion owing to variations in the interpretation of accounting symbols is potentially greater internationally than it is domestically. In the latter case, mutual understanding by both preparers and consumers of accounting information of the "ground rules" of measurement and interpretation helps to minimize communication distortions.

THE PRIMARY-SECONDARY REPORTING PROPOSAL

To help a reporting entity better meet its transnational reporting ob-

[5] Ibid., p. 45.

ligations, the Accountants International Study Group recommends that two kinds of financial statements be recognized as part of a country's official set of generally accepted accounting principles. *Primary* financial statements would be prepared for a reporting company's domestic readers. They would reflect the accounting and auditing standards of the reporting company's country of domicile and be expressed in the language and currency of that country, for example, a U.S. company's traditional annual report is provided to its U.S. shareholders. *Secondary* financial statements would be prepared specifically for financial reporting audiences of interest in other countries. These statements would reflect a combination of the accounting and auditing standards of the foreign country, as well as the language and currency of that country. Thus, a U.S. company with a major shareholder group domiciled in France would restate its domestic statements from American to French accounting principles. The statements would also be translated from U.S. dollars to French francs and from the English to the French language. Moreover, the auditor's opinion appearing on the secondary statements would be expressed in relation to French auditing and accounting norms.

One proported advantage of the primary-secondary reporting system is that it accommodates more than a single set of accounting and reporting standards. In doing so, full recognition is afforded different national viewpoints. Another advantage is that accommodating reader audiences through multiple sets of financial reports increases the information content and quality of primary-secondary statements thereby improving the transnational communication of financial data. Tailoring published corporate reports to specific readership groups also reduces the generalized nature of traditional reporting formats resulting in information that is more relevant to user decisions.[6]

A CROSS-CULTURAL ANALYSIS OF PRIMARY-SECONDARY REPORTING

Advantages associated with the AISG proposal make it intuitively appealing. But are these advantages more apparent than real? Specifically, do primary-secondary disclosures really improve the communication of financial information to foreign audiences of interest and, therefore, lead to better financial decisions than would otherwise be the

[6] For additional advantages, see Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 120.

case? The question is important in view of the relationship between financial disclosure and capital market efficiency.[7]

To answer the foregoing question, the primary and secondary financial statements of a Japanese company are examined in terms of traditional financial ratio analysis.[8] The objective is to assess the risk and return features of this company relative to a U.S. counterpart before and after the Japanese statements have been adjusted to reflect U.S. accounting and auditing standards.

Japan offers a suitable test environment in that many Japanese companies, having attained sufficient size and stature, are interested in raising funds in the U.S. capital market.[9] Perceived advantages of U.S. access include increased supply and diversification of loanable funds, lowered capital costs, and corporate prestige.[10]

As a condition for listing their shares on the major U.S. securities exchanges, foreign companies must conform to the financial reporting requirements of the United States Securities and Exchange Commission (SEC). In seeking comparability in financial statements issued to U.S. investors, the SEC permits, with certain exceptions, foreign issuers to prepare their financial statements in accordance with accounting principles generally accepted in their home country. Any material differences between the foreign and U.S. generally accepted accounting principles (GAAP) must be reconciled by way of footnotes to U.S. GAAP. In the case of Japanese companies, however, the commission has uniformly required that consolidated financial statements be prepared according to the GAAP of the United States. It is felt that Japanese financial statements are too vastly different from U.S. financial statements to merit special treatment.[11] Japanese restatements

[7] See Frederick D. S. Choi, "Financial Disclosure in Relation to a Firm's Capital Costs," *Accounting and Business Research* (Autumn 1973): 272-82.

[8] Ratio analysis is not without its limitations. However, limitations notwithstanding, financial ratios remain an integral feature of security analysis especially among the less sophisticated who are apt to be the major users of secondary statements.

[9] Japanese companies whose shares have been admitted to listing on the New York Stock Exchange include Kubota Ltd.; Matsushita Electric Industrial Co., Ltd.; Pioneer Electronic Corporation; and Sony Corporation. A half dozen others are currently listed on the American Stock Exchange.

[10] Based on personal in-depth interviews with corporate financial executives, professional accountants, and government officials in Japan, September and November 1979.

[11] *Proceedings,* Securities and Exchange Commission Major Issues Conference (Washington, D.C.: SEC, 1977), p. 3.

must now be expressed in the English language, and translation into U.S. dollars using a convenient rate is permitted.[12] In effect, the SEC has mandated that Japanese companies prepare secondary statements as a condition for U.S. listing on the premise that such statements are more able to meet the information needs of U.S. investors.

From a U.S. investor's perspective, Japanese security investments are attractive since Japan currently boasts a healthy economy as well as a strong currency. In recent years, the performance of the Japanese stock market has been very impressive relative to that of the U.S. and other national stock exchanges as can be seen in exhibit 1.

It has been shown that substantial advantages in risk reduction can be attained through portfolio diversification in foreign securities as well as in domestic common stocks.[13] As the correlation of returns and market risks between the Japanese and U.S. market are very low,[14] the inclusion of Japanese securities in U.S. investment portfolios offers attractive opportunities for reducing portfolio risk. Moreover, by increasing the supply of financial instruments in the United States, Japanese issuers make possible a larger number of internationally diversified portfolios than would otherwise be the case.[15]

Data underlying the comparative ratio analysis appear in the appendices to this paper. Appendix 1 illustrates the secondary financial statements of the Hitachi Company, a large manufacturer of electrical, electronic, and communications equipment.[16] These statements are prepared according to U.S. generally accepted accounting principles and are consolidated.[17]

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[12] "U.S. Rules Are Changed on Foreign Stocks," *Asian Wall Street Journal,* 12 February 1980, p. 2.

[13] Bruno H. Solnik, "Why Not Diversify Internationally Rather Than Domestically?" *Financial Analysts Journal* (July-August 1974): 48-54.

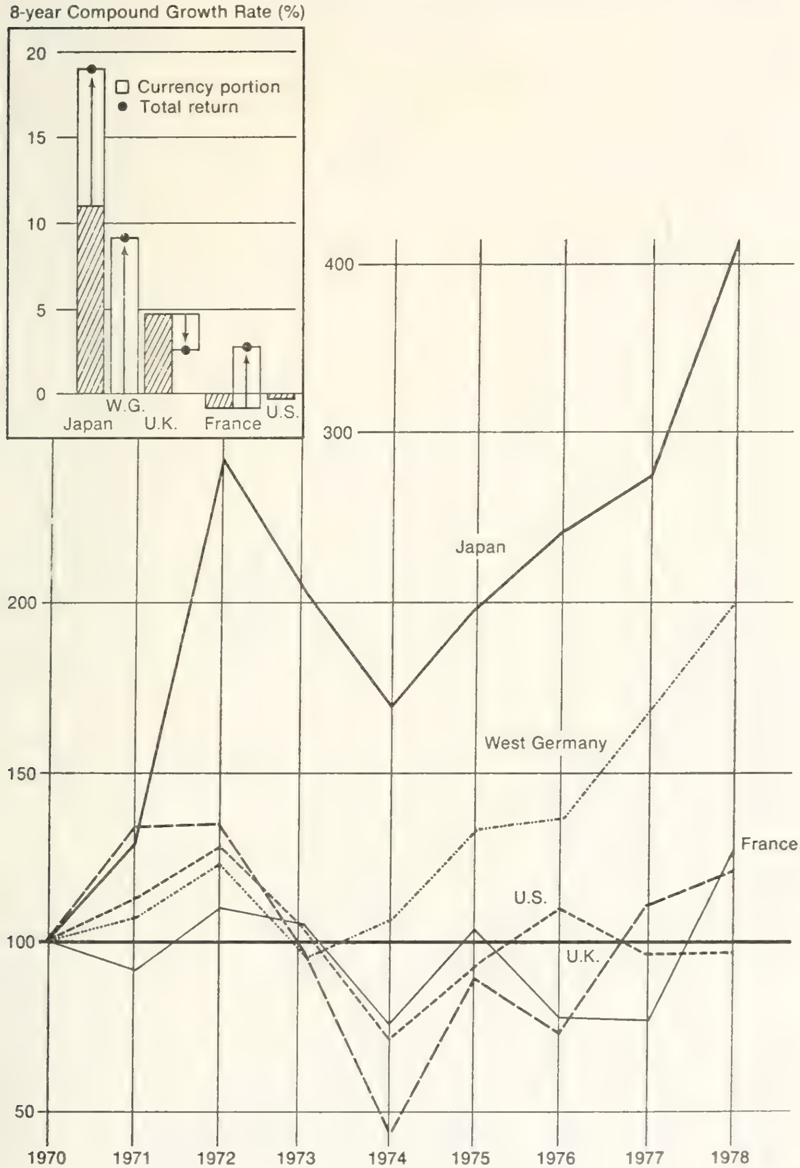
[14] The Nomura Securities Co., Ltd., *International Diversification: A Case for Japan* (Tokyo: Nomura Securities, 1979), p. 5.

[15] Additional advantages are discussed in Frederick D. S. Choi and Arthur I. Stonehill, "Foreign Access to U.S. Capital Markets: Theory, Myth, and Reality," *Proceedings,* Annual Meeting of the Academy of International Business (New Orleans, forthcoming).

[16] The company was selected randomly from a list of companies identified by the Institutional Research and Advisory Department of the Nomura Securities Company, Inc., as being the most likely candidates to raise funds in the United States. The author wishes especially to acknowledge the kind assistance of Mr. Hisaaki Hino and Mr. Junichi Ujiie for securing the primary statements and arranging for their translation to English.

[17] Hitachi's primary financial statements in the Japanese language and denominated in Japanese yen are available from the author upon request.

Exhibit 1. Market Performance Comparison*



* Market indexes with 1970 as the base year. (100) currency fluctuation adjusted.

Exhibit 2. Risk and Return Ratios: Hitachi vs. General Electric

Financial ratios	*Hitachi* (Primary F/S)	*General Electric* (Primary F/S)
Liquidity:		
Current ratio	1.2 times	1.4 times
Quick ratio	.87 times	.93 times
Inventory turnover	4.1 times	6.5 times
Average collection period	86 days	61 days
Solvency:		
Debt ratio (%)	76	55
Times interest earned	2.2 times	6.4 times
Profitability:		
Return on total assets (%)	2.5	8.1
Return on stockholders' equity (%)	10.5	18.6

The contents of exhibit 2 suggest that G.E. is by far the better investment candidate. Viewed from the eyes of a potential U.S. investor, Hitachi's liquidity, solvency, and profitability ratios are dominated by those of its U.S. counterpart. But is this a valid comparison? Proponents of the primary-secondary reporting system would argue it is not as Hitachi's statements mirror Japanese rather than American accounting principles. This potential "apples versus oranges" problem is a genuine concern if Japanese accounting norms differ significantly from those in the United States. That this is indeed the case is suggested by an examination of the relevant literature.[18]

While accounting and reporting practices in Japan are theoretically influenced by a variety of forces, including Japan's Commercial Code and Securities and Exchange Law, reporting entities have largely opted for tax-oriented accounting and disclosure. This practice is explained by the legal requirement that an expense cannot be deducted for tax purposes unless it is also deducted for book purposes. Accordingly, expenditures such as research and development and organizational costs are rarely capitalized. Depreciation expenses generally reflect

[18] Robert J. Ballon, Iwao Tomita, and Hajime Usami, *Financial Reporting in Japan* (Tokyo: Kodansha International Ltd., 1976), pp. 183-286; M. Edgar Barrett, Lee N. Price, and Judith Ann Gehrke, "Japan: Some Background for Security Analysts," *Financial Analysts Journal* (March-April 1974); John M. Crawford, "Accounting Considerations for Japanese Issuers in the United States," *Selected Papers* (New York: Haskins & Sells, 1974); Coopers and Lybrand, *Japan* (New York: Coopers and Lybrand, 1977), pp. 40-50; and Price Waterhouse International, *International Survey of Accounting Principles and Reporting Practices* (London: Price Waterhouse International, 1979).

accelerated as opposed to straight-line cost allocations while intangibles tend to be amortized over short-term horizons as compared with U.S. practice. This bias toward tax accounting principles also means that accounting for deferred taxes, owing to timing differences between book and tax reporting in revenue and expense recognition, is seldom, if ever, practiced.

A number of tax-saving reserves are also available to Japanese companies as a means of tax deferral. *Special purpose reserves* are an example of government sanctioned charges against current taxable income to encourage commercial activities deemed in the national interest. Although these reserves must subsequently be restored to income in a future period, the initial tax savings, generated by understating taxable income, operate as an interest-free loan to the reporting company from the government. Thus, corporations with stated capital of less than ¥100 billion may set aside 0.9 to 2.3 percent of total export revenues in an "overseas market development reserve" to be amortized within five years. To encourage foreign operations, between 30 and 100 percent of qualified overseas investments may also be provided for in a reserve for possible losses. These reserves, if permitted, would generally be considered part of owners' equity in the United States. In Japan, they are recorded as liabilities. *General purpose reserves,* available to a much broader cross section of Japanese entities, also offer tax advantages. Reserves for bad debts may be established far in excess of that justified by a firm's actual collection experience. With advance permission of the tax authorities, a reserve may be established for amounts due from companies in severe financial difficulties. Normally, this reserve is limited to 50 percent of such receivables, but under certain conditions, it may be as high as 100 percent. A certain percent of total inventory value may also be charged to current operations and carried in an "inventory price fluctuation" reserve. Although the amounts so established must be reversed in the following period, the price fluctuation reserve can be calculated again at that time.

Major differences between Japanese and U.S. accounting principles also relate to accounting for intercorporate investments. Thus, the preparation of consolidated financial statements, taken for granted by U.S. investors, is a rarity in Japan. Companies are often able to obscure or misrepresent parent-company earnings. This may be accomplished through the management of subsidiary dividends, or use of such devices as so-called special losses or profits, transfer of reserves between the

parent and related affiliates, as well as well-timed sales of real estate or other assets between related group members. In fiscal periods beginning on or after April 1, 1977, major companies in Japan are required by the Ministry of Finance to prepare consolidated financial statements. Despite this rule, however, many companies are reportedly circumventing the requirement by reducing their ownership interests in related subsidiaries below the 50 percent ownership criterion as a basis for consolidation.[19]

Whereas companies in the United States are required to account for nonconsolidated subsidiaries under the equity method, companies in Japan generally adhere to the cost method. Consequently, the only evidence of increases in the value of a company's intercorporate investments is the amount of dividends received from affiliated companies. This understatement of intercorporate investments is compounded by the practice of stock rights offerings in Japan being recorded at par as opposed to current (higher) market values.

As a final example of cross-national financial reporting variations, consider the level of corporate financial disclosure. The provision of comparative data, a generally accepted accounting principle in the United States, is not required in Japan as is disclosure of either accounting methods employed or changes in these methods. Any change approved by the tax authorities is accepted by the local community, and methods may be changed as often as tax authorities permit. Depending on the company, explanations of accounting changes may vary from the complete absence of supplementary disclosures to lengthy explanatory footnotes.

Exhibit 3 summarizes Hitachi's financial ratios based on its *secondary* financial statements. These statements have been prepared in conformity with U.S. accounting principles and have been audited by a major international CPA firm. Accordingly, the statements have been consolidated and employ the equity method of accounting for intercorporate investments. Tax-related reserves have been reversed out and timing differences between book and tax reporting are reflected in deferred taxes.

As a result of the statement translations, Hitachi's profitability ratios exhibit a definite improvement, although they are still lower than those of G.E. Hitachi's rate of return on total assets increases from 2.5 to 3.1 percent, while its rate of return on stockholders' equity increases

[19] Japan's Accounting Shake-Up," *Business Week* (25 April 1977): 150-51.

Exhibit 3. Hitachi's Adjusted and Unadjusted Risk and Return Ratios

Financial ratios	*Hitachi* (Primary statements)	*Hitachi* (Secondary statements)
Liquidity:		
Current ratio	1.2 times	1.2 times
Quick ratio	.87 times	.87 times
Inventory turnover	4.1 times	3.5 times
Average collection period	86 days	82 days
Solvency:		
Debt ratio (%)	76	74
Times interest earned	2.2 times	2.1 times
Profitability:		
Return on total assets (%)	2.5	3.1
Return on stockholders' equity (%)	10.5	11.6

from 10.5 to 11.6 percent. However, while Hitachi's profitability ratios improve, its liquidity and solvency ratios remain essentially unchanged. Based on this analysis, a U.S. investor would have to conclude that General Electric is still the better choice as Hitachi appears no less risky than before.

But is Hitachi really riskier, financially, than General Electric? It is not when analyzed from the perspective of the Japanese environment. This environment, incidentally, is where Hitachi conducts the bulk of its transactions. It is also the environment in which the company's financial transactions are perceived and symbolized for external reporting purposes. Proper evaluation of Hitachi's risk and return profile necessarily requires an awareness and understanding of business and financial mores in Japan.[20]

Consider, first, the question of financial leverage. Hitachi's ratio of total debt to total capitalization (debt ratio) of 74 percent appears alarmingly high when compared to G.E.'s 55 percent.[21] Viewed as a sign of impending bankruptcy in the United States, high debt ratios are not considered unusual by the Japanese owing to historical and postwar developments in Japan. When the Japanese government

[20] Information for this section is based on existing literature and in-depth interviews conducted with corporate executives, professional accountants, and government officials in Japan as part of a two-year research project concerning differences between U.S. and Japanese financial ratios.

[21] An expanded study in process suggests that the ratio differences observed between Hitachi and G.E. apply to the broader population of Japanese and U.S. companies as well. Frederick D. S. Choi et al., "International Ratio Analysis: Use and Misuse."

ended Japan's 200 years of international isolation over a century ago (the Meiji Restoration), it embodied rapid economic growth and development as a national goal.[22] To achieve this national obsession, the government established an extensive banking infrastructure to supply industry the bulk of its financial requirements. The reliance of industrial companies on the banking "establishment" was heightened during the aftermath of World War II with the need to rebuild a war-torn economy in the absence of viable financing alternatives. Large enterprises evolved with major commercial banks constituting the core of the new industrial groupings. Related through commercial and personal ties, as opposed to majority stockholdings characteristic of prewar *zaibatsu* (large holding companies), the relationship between banks and related companies has become very close — so close, in fact, that a bank would seldom impose financial penalities on delayed debt repayments or call a delinquent loan. Instead, it would typically extend the terms of repayment and occasionally refinance the loan. The lending bank would even go so far as to install a bank official on the board of the troubled company to provide it with helpful managerial assistance.[23] With interest and principal payments postponable, long-term debt in Japan assumes the feature of equity securities.

Hitachi's interest coverage of 2.1 times also stands in marked contrast to G.E.'s 6.4 figure. With a much smaller earnings buffer than its American counterpart, Hitachi theoretically runs a far greater risk of not being able to meet its periodic interest requirements. Again, with debt service payments postponable, the risk of default is more apparent than real. Drucker reinforces this point by offering a Japanese banker's perspective on the question of interest coverage. To quote him directly,

> A Japanese business must earn enough money to pay the interest on what is legally a bank loan but economically is equity investment in business and industry. The profit in the Japanese economy — the return on venture capital — is essentially the difference between what it costs a Japanese bank to attract and hold deposits, and the interest it charges for the loans to industry. Therefore, Japanese banks have traditionally kept interest rates on deposits exceedingly low. . . . The interest they charge their industrial customers, on the other hand, is rather high and runs at least one-third, if not one-half, above interest rates charged for truly commercial loans. . . . As long as the interest on these loans is secure, the bank is satisfied. Business earnings over and above

[22] Kamekichi Takahashi, *The Rise and Development of Japan's Modern Economy: The Basis for Miraculous Growth* (Tokyo: Jiji Press, 1969), p. 43.

[23] In Japan, corporate directors actively engage in the management of enterprise affairs.

what is needed to cover the interest charge with a fair safety margin are of no benefit to the bank. The bank's income is fixed, and therefore it exerts little pressure on its customers to increase earnings over and above the interest required.[24]

Institutional and cultural factors also cause liquidity ratios to differ without necessarily changing the basic financial risk characteristics being measured. For example, Hitachi's lower current ratio, reflecting a large current debt position relative to current assets, signals a relatively weaker short-term debt-paying ability to an American reader. In Japan, however, a lower current ratio is seldom indicative of corporate illiquidity as short-term debt assumes a different meaning. From a company's perspective, short-term borrowing is attractive as interest rates on shorter maturity obligations are typically lower than those on long-term obligations. Moreover, short-term borrowings are seldom liquidated but are normally renewed or "rolled over." Banks are more than willing to renew such loans as it affords them an opportunity to adjust their interest charges to reflect changing market conditions. Consequently, short-term debt in Japan operates more like long-term debt. Indeed, while officially granted for working capital purposes, the use of short-term debt to finance long-term assets appears to be the rule rather than the exception in Japanese financial management policies.

Longer average collection periods in Japan (eighty-two days for Hitachi versus sixty-one days for G.E.) also reflect differences in business customs. Purchases, for example, are rarely made for cash. Instead, postdated checks with maturities ranging between sixty to ninety days are common. The Japanese tradition of lifetime employment also influences, to some extent, collection policies. Companies will often go to great lengths to accommodate their commercial customers. During business downturns, repayment terms will be extended to avoid placing the buyer in a financial bind, thereby threatening an otherwise stable employment base. In return, continued patronage helps to assure employment stability for the selling enterprise. Lower inventory turnover statistics in Japan (see exhibits 2 and 3) are also affected by the lifetime employment tradition. During slack periods, manufacturing companies prefer to continue production and accumulate inventories rather than idle workers.

Adjusting Hitachi's primary financial statements to reflect U.S. generally accepted accounting principles eliminated the influence of

[24] Peter F. Drucker, "Economic Realities and Enterprise Strategies," in *Modern Japanese Organization and Decision-Making,* ed. Ezra Vogel (Berkeley: University of California Press, 1975), p. 233.

Japanese tax laws on its reported earnings. Despite the noted improvement, Hitachi's profitability ratios still did not exceed those of G.E. Would such lower profitability statistics raise the eyebrows of Japanese readers to the same extent as those of U.S. readers? They would not, as profits are viewed differently in Japan.

The U.S. reader of an annual report tends to be an outsider and an individual or institution, such as a mutual fund, concerned with a company's short-term performance. The Japanese reader, in contrast, tends to be an insider, an institution, and one that is interested in maintaining an existing commercial relationship. Thus, corporate shares issued in Japan are largely held by commercial banks, trade suppliers, and corporate customers who tend to be members of the same industrial group or in the same industry. These shareholders, in turn, are not so much interested in stock market gains as they are in maintaining and strengthening their individual functional business ties. Corporate shares are accordingly held over long-term horizons. Under these circumstances, short-term earnings statistics are of less concern than long-term results.

Explanations as to differences in Japanese–U.S. financial ratios, such as those enumerated, are far from exhaustive. However, the point being made should be clear. Concluding that Hitachi is a poorer investment candidate than G.E. on the basis of its accounting-based financial ratios is unwarranted. Proper interpretation of accounting signals and, therefore, effective communication of enterprise results across national boundaries cannot take place unless both message sender and receiver share a common understanding of the social, economic, and legal environment in which the message originates.

CONCLUSION AND RECOMMENDATIONS

Accounting has been described as a measurement and communication process. Since accounting measurements are based on business and financial transactions, whose nature is shaped by a given environment and since accounting measurement rules themselves are influenced by their environment, communication of differences in measurement rules *alone,* that is, differences in accounting principles, will not insure effective communication with foreign audiences of interest. In our preceding analysis, translating the primary financial statements of a Japanese company to secondary reports consistent with U.S. accounting norms proved potentially misleading. Although designed to accommodate differing national viewpoints, secondary financial statements, as pres-

ently construed, fail to recognize that a foreign reader's investment risks and rewards are highly dependent on the socioeconomic environment of the reporting company's country of domicile. The expected returns of a U.S. investor in Hitachi's common stock is ultimately a function of the performance of Hitachi's shares in the Japanese market, which is where the bulk of the company's shares are traded. Unfamiliarity with financial norms in Japan could very well result in a U.S. investor liquidating his Japanese investment in New York while his counterpart in Tokyo is behaving in just the opposite fashion, a less than desired state of affairs.

This major shortcoming of the AISG proposal can be remedied by supplementing secondary financial statements with environmental disclosures that assist foreign readers in properly interpreting these accounting reports. Disclosures as to common business and financial practices underlying reported accounting numbers will at least assure that signals transmitted by the secondary statements are interpreted within the proper environmental context. In terms of the measurement and communication process outlined earlier (namely, perception, symbolizing, analysis, and communication), supplementary environmental disclosures will help to assure that both the message sender and receiver will share similar perceptions of the significant activities of the accounting entity. It is noteworthy that one of the five guidelines for the communication of accounting information recommended by the American Accounting Association's *Statement of Basic Accounting Theory* deals with the inclusion of environmental information.[25]

Should the foregoing proposal prove unacceptable, the only realistic alternative would be to regress to the status quo and disregard secondary reporting as presently envisioned. As before, readers would have to assume the primary burden of familiarizing themselves with the foreign environment in question — its culture, business practices, and financial mores — before making a foreign investment decision. These decisions, in turn, would have to be based on information contained in the reporting company's primary financial statements as opposed to its secondary statements. The latter would then contain accounting measurement rules inappropriate to the environment of the reporting entity.

Of the two options described, the former proposal is clearly preferable. After all, the function of international accounting is to provide

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[25] American Accounting Association, *A Statement of Basic Accounting Theory* (Evanston, Ill.: AAA, 1966), p. 14.

international decision makers with relevant information and to provide that information at a lower cost to transnational readers than would otherwise be the case. In providing foreign readers with environmental information, accounting as an information speciality fulfills its dual role in the global community thereby retaining its sharp cutting edge of social usefulness.

APPENDIX 1. Hitachi's Secondary Financial Statements

HITACHI, LTD. AND CONSOLIDATED SUBSIDIARIES
Consolidated Statements of Income

	Year ended March 31			
	Yen (millions)		*U.S. Dollars (thousands) (note 2)*	
	1978	*1977*	*1978*	*1977*
Net sales (note 5)	¥2,376,972	2,221,999	$10,804,418	10,099,995
Cost of sales (note 5)	1,746,344	1,645,405	7,937,927	7,479,114
Gross profit	630,628	576,594	2,866,491	2,620,881
Selling, general and administrative expenses	447,090	393,584	2,032,227	1,789,018
Operating income	183,538	183,010	834,264	831,863
Other income:				
Interest	47,141	45,274	214,277	205,791
Dividends	3,553	2,800	16,150	12,727
Other (note 5)	20,300	11,009	92,273	50,041
	70,994	59,083	322,700	268,559
Other deductions:				
Interest	72,346	80,950	328,846	367,954
Other	4,987	4,088	22,668	18,582
	77,333	85,038	351,514	386,536
Income before income taxes	177,199	157,055	805,450	713,886
Income taxes (note 7):				
Current	94,953	89,421	431,604	406,459
Deferred	(4,470)	(7,994)	(20,318)	(36,336)
	90,483	81,427	411,286	370,123
Income before minority interests	86,716	75,628	394,164	343,763
Minority interests	8,867	5,459	40,305	24,813
Net income	¥ 77,849	70,169	$ 353,859	318,950

	Yen		*U.S. dollars (note 2)*	
Net income per share of common stock:				
Assuming no dilution	¥ 30.07	27.29	$ 0.137	0.124
Assuming full dilution	¥ 28.55	25.85	$ 0.130	0.118

HITACHI, LTD. AND CONSOLIDATED SUBSIDIARIES
Consolidated Balance Sheets

	March 31			
	Yen (millions)		U.S. Dollars (thousands) (note 2)	
Assets	*1978*	*1977*	*1978*	*1977*
Current assets:				
Cash	¥ 278,941	276,513	$ 1,267,913	1,256,877
Marketable securities (notes 3 and 6)	248,970	191,037	1,131,682	868,350
Trade receivables, net of allowance for doubtful accounts and unearned income — 1978¥20,356 million ($92,527,000); 1977 ¥18,132 million ($82,418,000) (note 5):				
Notes	171,576	166,361	779,891	756,186
Accounts	362,349	373,091	1,647,041	1,695,868
Inventories	492,477	511,112	2,238,532	2,323,237
Prepaid expenses and other current assets (note 7)	102,991	104,822	468,141	476,464
Total current assets....	1,657,304	1,622,936	7,533,200	7,376,982
Noncurrent receivables and restricted funds (note 4)	267,341	247,276	1,215,186	1,123,981
Investments and advances, principally nonconsolidated subsidiaries and affiliated companies (notes 3 and 5)	168,756	152,046	767,073	691,118
Property, plant and equipment (note 6):				
Land	71,022	70,032	322,827	318,327
Buildings	279,707	267,708	1,271,395	1,216,855
Machinery and equipment	615,429	565,303	2,797,405	2,569,559
Construction in progress..	9,324	6,528	42,382	29,673
	975,482	909,571	4,434,009	4,134,414
Less accumulated depreciation	550,399	503,439	2,501,814	2,288,359
Net property, plant and equipment........	425,083	406,132	1,932,195	1,846,055
Other assets (note 7)	24,975	20,482	113,523	93,100
	¥2,543,459	2,448,872	$11,561,177	11,131,236

	March 31			
	Yen (millions)		U.S. Dollars (thousands) (note 2)	
	1978	1977	1978	1977
Liabilities and stockholders' equity				
Current liabilities:				
Short-term bank loans (note 6)	¥ 487,155	517,044	$ 2,214,341	2,350,200
Current portion of long-term debt (note 6)	66,491	66,937	302,232	304,259
Trade payables (note 5):				
Notes	130,050	129,070	591,136	586,682
Accounts	150,161	140,193	682,550	637,241
Accrued expenses	128,721	123,031	585,095	559,232
Income taxes (note 7)	53,634	57,710	243,791	262,318
Advances received	130,007	142,116	590,941	645,982
Employees' deposits	94,796	90,496	430,891	411,345
Other current liabilities	91,436	68,367	415,618	310,759
Total current liabilities	1,332,451	1,334,964	6,056,595	6,068,018
Long-term debt (note 6)	311,498	321,106	1,415,900	1,459,573
Retirement and severance benefits	137,204	118,055	623,655	536,614
Minority interests:				
Capital stock	17,288	15,932	78,582	72,418
Surplus	75,332	58,472	342,418	265,782
Total minority interests	92,620	74,404	421,000	338,200
Stockholders' equity:				
Common stock of ¥50 par value. Authorized 10,000,000,000 shares; issued 2,598,493,114 shares in 1978 and 2,586,211,962 shares in 1977 (notes 6 and 8)	129,925	129,311	590,568	587,777
Capital surplus	51,705	43,651	235,022	198,413
Legal reserve (note 9)	31,212	29,102	141,873	132,282
Retained earnings:				
Appropriated	56,839	54,697	258,359	248,623
Unappropriated (notes 6 and 9)	400,842	344,603	1,822,009	1,566,377
	670,523	601,364	3,047,831	2,733,472
Less cost of common stock held by consolidated subsidiaries, 5,555,646 shares in 1978 and 6,714,279 shares in 1977	837	1,021	3,804	4,641
Total stockholders' equity	669,686	600,343	3,044,027	2,728,831
Commitments and contingent liabilities (note 10)	¥2,543,459	2,448,872	$11,561,177	11,131,236

APPENDIX 2. G.E.'s Primary Financial Statements

Statement of earnings

General Electric Company and consolidated affiliates

For the years ended December 31 (in millions)	1978	1977
Sales of products and services to customers	$19,653.8	$17,518.6
Operating costs		
Employee compensation, including benefits	7,401.3	6,555.5
Materials, supplies, services and other costs	9,866.7	8,753.9
Depreciation, depletion and amortization	576.4	522.1
Taxes, except those on income	250.6	239.0
Increase in inventories during the year	(399.1)	(249.9)
	17,695.9	15,820.6
Operating margin	1,957.9	1,698.0
Other income	419.0	390.3
Interest and other financial charges	(224.4)	(199.5)
Earnings before income taxes and minority interest	2,152.5	1,888.8
Provision for income taxes	(893.9)	(773.1)
Minority interest in earnings of consolidated affiliates	(28.9)	(27.5)
Net earnings applicable to common stock	$ 1,229.7	$ 1,088.2
Earnings per common share (in dollars)	$5.39	$4.79
Dividends declared per common share (in dollars)	$2.50	$2.10
Operating margin as a percentage of sales	10.0%	9.7%
Net earnings as a percentage of sales	6.3%	6.2%

Statement of financial position

General Electric Company and consolidated affiliates

At December 31 (in millions)	1978	1977
Assets		
Cash	$ 1,992.8	$ 1,717.9
Marketable securities	470.3	560.3
Current receivables	3,288.5	2,982.7
Inventories	3,003.4	2,604.3
Current assets	8,755.0	7,865.2
Property, plant and equipment	8,328.2	7,514.5
Accumulated depreciation, depletion and amortization	(4,305.6)	(3,930.4)
	4,022.6	3,584.1
Investments	1,410.5	1,433.3
Other assets	847.9	814.2
Total assets	$15,036.0	$13,696.8

Liabilities and equity		
Short-term borrowings	$ 960.3	$ 772.1
Accounts payable	1,217.2	1,021.4
Progress collections and price adjustments accrued	1,667.3	1,369.7
Dividends payable	147.6	125.1
Taxes accrued	532.6	619.9
Other costs and expenses accrued	1,650.2	1,508.8
Current liabilities	6,175.2	5,417.0
Long-term borrowings	993.8	1,284.3
Other liabilities	1,129.5	921.2
Total liabilities	8,298.5	7,622.5
Minority interest in equity of consolidated affiliates	150.8	131.4
Preferred stock ($1 par value; 2,000,000 shares authorized; none issued)	—	—
Common stock ($2.50 par value; 251,500,000 shares authorized; 231,463,949 shares issued 1978; 231,410,196 shares issued 1977)	578.7	578.5
Amounts received for stock in excess of par value	658.0	668.4
Retained earnings	5,522.4	4,862.5
	6,759.1	6,109.4
Deduct common stock held in treasury	(172.4)	(166.5)
Total share owners' equity	6,586.7	5,942.9
Total liabilities and equity	$15,036.0	$13,696.8
Commitments and contingent liabilities		

APPENDIX 3. Choice of Financial Ratios

The ratios selected for analysis should be the ones most frequently used by investors, security analysts, and bond rating services. The ratios used in Weston and Brigham, *Essentials of Managerial Finance,* 5th ed. (New York: Dryden Press), should suffice for this purpose. They are listed below.

A. Liquidity		Measures of financial risk
1) Current	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Used to analyze the ability to meet short-run debt commitments.
2) Quick, or acid test	$\frac{\text{Current assets} - \text{inventory}}{\text{Current liabilities}}$	
B. Leverage		
3) Debt to total capitalization	$\frac{\text{Total debt (book value)}}{\text{Total assets (book value)}}$	Used to analyze the ability to meet long-run debt and fixed charge commitments.
4) Times interest earned	$\frac{\text{EBIT}}{\text{Interest charges}}$	
5) Fixed charge coverage	$\frac{\text{EBIT} - \text{Fixed charges}}{\text{Fixed charges}}$	
C. Efficiency (activity)		
6) Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	Used to analyze the "staleness" of inventory.
7) Average collection period	$\frac{\text{Receivables}}{\text{Sales per day}}$	Used to analyze the "staleness" of receivables.
8) Fixed asset turnover	$\frac{\text{Sales}}{\text{Fixed assets}}$	Used to analyze sales efficiency of plant and equipment.
9) Total operating assets turnover	$\frac{\text{Sales}}{\text{Total operating assets}}$	Used to analyze sales efficiency of total assets.
D. 10) Profitability	$\frac{\text{Net profit after taxes}}{\text{Sales}}$	Used to analyze competitive margins.
11) Return on total assets	$\frac{\text{Net profit after taxes}}{\text{Total assets}}$	Used to measure profit efficiency of total assets.
12) Return on net worth	$\frac{\text{Net profit after taxes}}{\text{Net worth}}$	Used to measure profit efficiency of stockholders' funds.

Accounting for Joint Ventures with the Soviet Bloc and China

RONALD E. HOYT and LAWRENCE D. MAPLES*

INTRODUCTION

The purpose of this paper is two-fold: first to examine the implications of accounting for "joint ventures" between U.S. firms and public-sector enterprises in the Soviet Bloc and China, and secondly to provide an analysis of tax implications for these types of ventures.

The critical elements of accounting for joint ventures include the following items: (1) valuation standards for investments based on contractual relationships with foreign governments, (2) absence of convertible currency by which to measure international transfers between partners, (3) income-timing considerations, and (4) accounting standards designed to fit market-type economies.

CENTRAL ISSUES

The first part of this paper addresses the question of appropriate consolidation procedures for a Western firm engaged in contractual investment in an Eastern Bloc country in three parts: (1) definition and description of contractual investment in East-West trade; (2) discussion of the criterion of significant influence for the case of joint ventures in the Soviet Bloc or China, and (3) evaluation of a Canadian alternative for joint-venture accounting.

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The second part examines the effects which special conditions of a joint venture in an Eastern Bloc country have on tax liabilities of a U.S. firm.

Contractual Investment Defined

Contractual investment in East-West trade was described during the early 1970s by John B. Holt of the Fletcher School of Law and Diplomacy, as a process by which Western firms and their Eastern partners engage in business activities normally known as direct investment, but with the unique feature that the relationship is based on a contractual instrument rather than ownership rights in the means of production.[1] A contract is substituted for common stock in most cases, and in the cases where common stock is present, it is a device or surrogate for pro rata share of investment rather than residual ownership rights.

Several aspects of the motivation for contractual investment must be understood if one is to appreciate the accounting problem involved. The first aspect touches the valuation models on which the two systems base their respective decisions. In the West, three major categories of valuation might be suggested as follows:

1. Accounting values based on market-determined prices assuming segmentation in the markets
   a. entry values
   b. exit values;
2. Accounting values based on market prices plus general price index adjustments; and
3. Accounting values based on highly segmented market prices: appraisal values in real estate; rare art.[2]

In each case, the prices established in an exchange, said to be at arms' length, govern the accounting numbers to be recorded. In a command economy, by contrast, prices are determined arbitrarily as a function of government policies on items such as wages and services, and materials used in production.[3] The subsequent derived prices which result from a large input-output model of the industrial sectors are arbitrary as well in the sense that these prices flow from social policy.

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[1] John B. Holt, "New Rules for Western Multinationals in Eastern Europe," *Columbia Journal of World Business* (Fall 1973).

[2] See, for example, chapter 3 of Edgar O. Edwards and Philip W. Bell, *The Theory and Measurement of Business Income* (Berkeley: University of California Press, 1961).

[3] Robert W. Campbell, *The Soviet-Type Economies: Performance and Evaluation,* 3rd ed. (Boston: Houghton Mifflin, 1974).

Transactions in the world marketplace which do involve external prices are also viewed in the context of an input-output model. Professor Holzman of Harvard University has suggested that the foreign trade inputs are those goods sold by the state to generate hard currency.[4] The output of the process consists of goods purchased in foreign markets as gap fillers in the internal production process. Gain or loss on these transactions in aggregate for a Foreign Trade Organization (cost center) is a function of the internal prices for the aggregate sold and the aggregate bought. This, too, represents an extension of arbitrary prices.

From these brief comments, it is apparent that East-West trade takes place at the interface of two dramatically different systems of price structure. Joint ventures with Eastern partners involve not only radically different pricing techniques but different approaches to legal control and ownership rights as well. To further complicate matters, the international transactions of the joint enterprise take place without the convenience of convertible currency. An analysis of several hundred North American firms' experience dealing with the Eastern Bloc suggests the following arrangements classified according to consideration:[5]

1. Cash (hard-currency transactions);
2. Barter (quid pro quo exchanges of dissimilar goods);
3. Countertrade (big ticket sales accompanied by self-liquidating debt involving dissimilar product);
4. Parallel trade (a triangular or multiple party barter exchange); and
5. Compensation (sale of plant and equipment accompanied by a buy-back agreement involving resultant product).

Although the transactions appear to be quite diverse, there are certain similarities that are important to understanding the process of trade. First of all, they are designed to circumvent, where possible, the absence of convertibility and consequent shortage of hard currency. Secondly, these arrangements have an objective of avoiding pure debt. That is, cash transactions are used for small purchases such as specialty goods for the Berioska (hard-currency stores with areas limited to special goods and services). Barter involves commodity-for-commodity exchanges, but countertrade and compensation involve self-liquidating credit arrangements enabling industrial equipment to be bought over

[4] Franklyn D. Holzman, *Foreign Trade Under Central Planning* (Cambridge: Harvard University Press, 1974), p. 321.

[5] *East-West Industrial Cooperation: The U.S. Perspective* (Washington, D.C.: Bureau of East West Trade, U.S. Department of Commerce, May 1976).

the long term with the assurance that goods, not hard currency, will be used to repay the debt.

There are several methods of classifying the types of transactions involved in trade with the Eastern Bloc of China. The first is to group transactions by consideration exchanged as shown in exhibit 1.

Exhibit 1. Transactions Determined by Consideration

Transaction	*Consideration exchanged*
1. Monetary	Hard currency
2. Nonmonetary	Barter
	Countertrade
	Parallel trade
3. Mixed	Compensation agreements

A second classification method involves grouping exchanges by purpose, as suggested by Professor R. Lonstarienan, Helsinki School of Economics.[6]

Exhibit 2. Transactions Grouped by Purpose of Exchange

1. Unilateral	— One-way transfer of goods and services to Eastern Bloc
2. Bilateral	— Two-way transfer of goods and services to Eastern Bloc (industrial cooperation)
3. Triangular	— Eastern Bloc partner and Western firm engage in joint projects in third world countries

Upon examining the motivations for these rather distinct groupings, it becomes apparent that unilateral trade (cash purchases) are stopgap acquisitions to soften the impact of planning inadequacies. Bilateral exchanges involve longer-term considerations, in particular organizational development. The objective is improving organizational effectiveness through more sophisticated technology and better management techniques.[7] It is in this context that joint ventures (as defined in U.S. and Canadian accounting standards) play a role. The third category,

[6] Comments provided during the discussion of a paper entitled "Models of East-West Trade" presented at the Academy of International Business Conference in Manchester, England, 22 November 1978.

[7] Ronald E. Hoyt and Lawrence D. Maples, "U.S. Taxation of Firms Engaged in East-West Compensation Agreements under the Doctrine of 'Open Transactions,'" Academy of International Business Conference Proceedings (University of Hawaii, December 1979).

cooperation in third countries, ostensibly involves economic development.

The discussion to this point has served to differentiate the essence of a variety of exchanges from their form. It should be apparent that many transactions are similar to those present in market economies except for the type of consideration given in exchange. However, a certain number of very important transactions are longer term in nature and involve contractual arrangements by which the Western firm "invests" plant and equipment, and management services with a view to receiving payment in the resultant product of the enterprise, over a number of years and dependent on the success of the enterprise. The major categories of compensation agreements are presented in exhibit 3. These definitions differentiate between different types of arrangements from a legal perspective. However, from an accounting viewpoint, it is along the lines of timing of income rather than the form of consideration that the boundaries should be drawn to separate sales from investment.

Exhibit 3. Forms of Industrial Cooperation

Joint ventures

Three factors must be present for a venture:

(a) At least two partners pool assets to form a new and distinct economic entity.
(b) The partners agree to share profits and losses.
(c) The partners jointly manage the enterprise.

Co-production and specialization

Both partners produce components for a final product to be assembled by one partner; technology is usually supplied by one partner; and there is usually an agreement to market the product in each partner's respective market.

Subcontracting

The socialist partner manufactures the product according to the Western partner's specifications and delivers the products to the Western partner.

Licensing

The Western firm licenses technology to the socialist partner and payment is made, not in the ordinary form of hard-currency royalties, but in products or components resulting from the use of the license.

Turnkey plants

The Western partner sells plant and equipment, and technology to a socialist partner and is paid in the products of the newly created plant.

Source: James F. Pedersen, "Joint Ventures in the Soviet Union: A Legal and Economic Perspective," *Harvard International Law Journal* (Spring 1975): 391.

From an accounting standpoint, certain similarities exist between direct investment and contractual investment. Productive assets are transferred to a host country. Income is a function of the successful operation of the new enterprise at least (1) with respect to quality of output, and (2) with respect to consumer attitudes and tastes. Income is derived from product output rather than from cash payments for the assets transferred.

Therefore, the three major risk elements present in international investment are also present in contractual investment. These are (1) country risk involving political and cultural characteristics relating to the national environment; (2) business risk associated with the financing, production, and marketing of the products in question; and (3) exchange risk arising from changes in the relative price levels of different economies which translate normally into currency-exchange gains or losses.

There are certain peculiarities unique to contractual investment not present in direct foreign investment. The foreign firm is prohibited from owning an interest in productive facilities even by means of a host country intermediary. The firm has instead ownership rights to a share of the output of the joint enterprise plus certain management authority regarding quality control, engineering design, training of the labor force, and, in some cases, marketing networks. Secondly, power in an organizational sense flows from the state to the foreign firm through the contract rather than through a body of common law relating to property rights.[8] Thirdly, there is an absence of currency measures for valuation of individual transactions. Finally, there is a fundamental difference in the valuation bases used to price each partner's share of investment contributed to the joint enterprise.

The Criterion of Significant Influence

To encourage transfers of technology to their industries, a number of Eastern Bloc countries have created provision for the Western firms to form joint ventures, as described earlier.[9] The notable exception is the Soviet Union, but even there, contractual relationships enable long-term transfers of technology with repayment in resultant product. U.S.

[8] James F. Pedersen, "Joint Ventures in the Soviet Union: A Legal and Economic Perspective," *Harvard International Law Journal* (Spring 1975): 390-439.

[9] J. A. Burgess, "Direct Foreign Investment in Eastern Europe: Problems and Prospects for Romania's Joint Venture Legislation," *Law and Policy in International Business* (Fall 1974): 1059-1104.

accounting recommendations pertinent to these relationships may be found in four sections of the Accounting Code published by the American Institute of Certified Public Accountants: §1081, §2051, §4095, and §5131. The following brief summary is offered.

Section 1081 dealing with foreign operations and foreign exchange suggests in par. 04 that U.S. companies show earnings from foreign operations in their own statements "only to the extent that funds have been received in the United States or unrestricted funds are available for transmission thereto."

Paragraph 06 deals with foreign assets held abroad and their jeopardy, suggesting that

> especial care be taken in each case to make full disclosure in the financial statements of United States companies of the extent to which they include significant foreign items.

Paragraph 08 and 09 treat methods of providing disclosure and consolidation of foreign subsidiaries. Paragraph 08 advises that

> ... careful consideration should be given to the fundamental question of whether it is proper to consolidate the statements of foreign subsidiaries with statements of U.S. companies.

Section 2051 deals with consolidated financial statements as set forth in ARB 43. Paragraph 03 states the general rule for consolidation is a controlling financial interest: "the usual condition (...) is ownership of a majority voting interest." The exception to this rule cited in the same paragraph is the situation in which control is temporary. Paragraph 04 states a general principle for setting consolidation policy: "the aim should be to make the financial presentation which is most meaningful in the circumstances."

Section 4095 deals generally with special areas of accounting for income taxes as set forth in APB 23. Paragraphs 15 through 18 focus on the special case of investments in joint ventures.

Paragraph 15 reiterates the distinction set forth in Section 5131 of two types of joint ventures: (1) those which are permanent in duration, and (2) those limited in life by the nature of the activity. Paragraph 16 suggests that a corporate joint venture may have "many of the characteristics of a subsidiary" supporting the conclusion of the board in Section 5131 that the equity method of accounting best enables an investor in a corporate joint venture "to recognize the underlying nature of the investment regardless of duration." In par. 17, the board's opinion extends tax allocation procedures applicable to undistributed earnings of subsidiaries to earnings of corporate joint ven-

tures. Paragraph 18 reinforces the parallel treatment by requiring the same disclosure requirements as well.

Section 5131 defines the general framework of the equity method of accounting for investments in common stock, as set forth in APB No. 18. Paragraph 01 of the introduction explicitly extends the applicability of the equity method "to investments in common stock of corporate joint ventures." Paragraph 03 defines "corporate joint ventures" as follows: "a corporation owned and operated by a small group of businesses as a separate and specific business *or project* for the mutual benefit of the members of the group." (Emphasis added)

Examples of characteristics found in joint ventures are these:

1. Sharing of risks and rewards in developing a new market, product, or technology;
2. Combining complementary technological knowledge; and
3. Pooling resources in development of production or other facilities.

Additional characteristics of corporate joint ventures are these: (1) an arrangement for participation in management by each joint venturer is usually provided; (2) usually the interest of joint ventures goes beyond passive investment; (3) ownership seldom changes; its stock is not traded publicly; and (4) a government may also be a member of the group. Paragraph 16 states the board's opinion that investors should use the equity method to account for investments in common stock of joint ventures both in their consolidated statements and in parent-company financial statements if they qualify as having "significant influence" as stated in par. 17 is the following:

> an investment (direct or indirect) of 20% or more of the voting stock of an investee should lead to a presumption that in the absence of evidence to the contrary an investor has the ability to exercise significant influence over an investee.

This brief review of the major recommendations concerning accounting treatment of joint ventures serves to underline three important elements of joint ventures in the East-West context:

1. Many of the arrangements described in the first section do in fact fit the spirit, if not the letter, of these recommendations.
2. In the political and economic context of E-W trade, it becomes apparent that although the criterion of significant influence for a particular venture may be satisfied, other risks may require the use of the cost method for a reasonable presentation.
3. Notwithstanding points 1 and 2, the fundamental differences in the

two economic systems make the process of valuation of an entire business entity for purposes of presentation in the U.S. statements both an illegal act (from the Soviet perspective) and a highly unrealistic exercise since the investment itself can never be reclaimed or resold.

The problems, therefore, in applying the current recommendations to situations described earlier as compensation arrangements and specifically joint ventures, arise because the analytical and cultural framework assumed in the recommendations is not the norm for East-West trade. First, the concept of a market economy and the rules for valuing assets and enterprises are absent. Fair presentation of the U.S. corporation's interests in a series of values arbitrarily set by the foreign government as its share of a joint venture is misleading and probably meaningless.

Secondly, the accounting recommendations view stock as a contractual instrument representing ownership rights within the broad context of English common law tradition. In joint ventures for which separate corporations have been established, the stock represents a pro rata share of investment and rights to earnings but in no way suggests ownership of the underlying assets used in the means of production. The situation is similar in many ways to the present treatment of lease purchase agreements in the sense that the lessee enjoys the economic benefits of a productive asset and accounts for its consumption through depreciation in the process of creating revenues yet holds no legal title to the asset. In law it belongs to the lessor. Thus the accounting recommendations assume certain given facts in the relationship between use of productive resources for the generation of revenue and the legal basis on which an entity has the right to use these productive resources.

A third problem which has several aspects is the test of significance (Sec. 5131, par. 17). One issue which is unresolved by the position of the board relates to the phrase "significant influence over an investee." In a very narrow sense, the investee is the joint venture entity. Many aspects of the joint venture are under very considerable control of the foreign company. For example, the foreign company may control engineering, technology, production standards, equipment used, training of employees, and marketing channels for part or all of the product sold abroad. This control resembles a controlling interest. However, the entity itself, though legally separate, is in practice grafted inseparably into the total political-economic structure of the country so that the investee is also in a larger sense the Ministry of Industry X or Y. No

one would suggest that the U.S. firm exercised "significant influence" in this broader context.

The investee is dominated by the ministry of its respective industry in several key areas. First, there is total control over the labor force. If the ministry wished to stop production, it could simply allocate the laborers elsewhere. Secondly, the supply of raw materials, their shipment, and their release across borders for sale abroad can all be controlled by the ministry in question. When, therefore, we speak of significant influence, we must not lose sight of the degree of control in the environment external to the investee. While the U.S. firm may have a relatively free hand in the internal environment of the joint venture and under the rights given in the contractual relationship be capable of predicting with some degree of certainty the units of product it will receive for sale in its own markets, access to labor and materials are controlled totally by the state.

If the equity method is conceptually inadequate for the case in point, it is not certain that the alternative/cost method represents a better solution. In brief, the cost method would seem to apply to situations of substantial political uncertainty for which it is uncertain that the U.S. firm will be able to benefit fully from its investment. The usual example which comes to mind is threat of expropriation by a foreign government. In these cases, the board simply recommends that U.S. firms show earnings "only to the extent that funds have been received" (Sec. 1081.04).

One of the odd aspects of compensation agreements is the fact that the beginning of the transaction involves the transfer of plant and equipment from the U.S. firm to its Eastern partner in return for which a sum of money covering the majority or all of the cost of equipment is transferred from a bank to the U.S. firm.[10]

If the transaction were isolated at this stage, there would be a simple sale for which to account. But, in fact, there is a simultaneous and related contract by which the U.S. firm agrees to purchase an amount of product equivalent in value to the equipment sold or in some cases for substantially greater value during the life of the enterprise. Within the framework of the package, the U.S. firm normally also has certain responsibilities for management services, production of subassemblies, and quality control. If one looks beyond the form of

[10] Jennell Matheson, Paul McCarthy, and Steven Flander, "Counter-trade Practices in Eastern Europe," *East European Economies Post-Helsinki* (Washington, D.C.: Joint Economic Committee of Congress, 1977), pp. 1277-1311.

the arrangement, it is clear that one is dealing with a joint enterprise not only in the case of joint ventures of the traditional type but also in many compensation packages classified under different titles. In these cases, although funds have in effect been received, a liability still exists under the associated contract and the question of timing comes into focus.

The criterion of funds transfers thus does not portray the underlying economic reality in East-West joint enterprises. Cash exchanged for goods may only be a case of capital cost recovery. A second reason which may be given for questioning the use of the cost method is the element of reasonable certainty associated with a contract with the state. Normally the cost method is used precisely for the reason that the host country conditions are unstable, and one is not certain of the security of one's investment. In contractual joint ventures, the opposite is presumed to be true. One is certain of the disposition of one's investment from the date the contract is signed. All of the normal features of business risk such as production problems, changes in market preferences, inflation, and so on, are still present, but one is certain of the formula by which the investment will be repaid in product. This fact alone raises a serious question about the appropriateness of the cost method.

From the foreign discussion, it seems clear that joint ventures in the command economies of the Eastern Bloc and China should not be accounted for by the equity method even in the case of significant influence over the internal affairs of the investee. By contrast, the cost method seems inadequate, first because it suggests uncertainty regarding the safety of the assets invested in the host country — an uncertainty that is unwarranted by the contractual framework described above. Secondly, there is a very real sense in which the U.S. firm engages in an investor relationship contributing its most valuable resources: technology, managerial skills, and marketing channels to the enterprise, along with the equipment transferred under the agreement.

It seems appropriate, therefore, to consider other alternatives to joint venture accounting in view of the foregoing analysis. One such alternative is the Canadian approach to joint venture accounting as set forth in the manual of the Canadian Institute of Chartered Accountants.

Canadian Alternative for Joint Venture Accounting

Section 3055 of the *CICA Manual* defines joint ventures in the follow-

ing terms: "A joint venture is an arrangement whereby two or more parties jointly control a specific business undertaking and contribute resources towards its accomplishment." (par. 03)

Specific features of the joint venture include:

1. Life limited to the duration of the undertaking. (par. 03)
2. Relationship of the ventures is governed by an agreement usually in writing establishing joint control. (par. 04)
3. Frequently formed for purpose of sharing risks and rewards in developing a new market, product, or technology. (par. 05)

Guidelines given relative to accounting for joint ventures include the following three elements: (1) recognize income as earned rather than received, (2) match costs and revenues, and (3) handle transactions between the venture and the venturer appropriately. Three recommendations are given to cover various joint venture situations:

par. 13 When earnings of a joint venture are unlikely to accrue to the venturer, the cost method should be used.

par. 11 When a significant portion of the venturer's activities is carried out through joint ventures either the equity method or proportionate consolidation should be used.

par. 11 Elsewhere the equity method should be used.

The concept of proportionate consolidation involves the incorporation of the investor's pro rata share in the assets, liabilities, revenues, and expenses of the venture rather than a full consolidation as would be the case with a majority position in a subsidiary. For less than 51 percent ownership, the equity method shows a one-line consolidation whereas proportionate consolidation would add to the investor's statements the pro rata share of each asset, liability, revenue, or expense of the joint venture.

In the case of joint ventures with the Eastern Bloc, the advantage of this type of approach would be on the one hand to enable the Western firm to acknowledge precisely its pro rata share in the total venture by showing its actual investment or the value of its pro rata share in market prices without complicated calculations to translate economic values at artificial exchange rates. In addition, it would reflect the economic reality of an investment in a joint venture under contract with a foreign government. At present, the transactions are either passed through sales without reference to future commitments or are deferred until realization of revenue from the end products occurs or are simply omitted on grounds of lack of materiality.

A second advantage of proportional consolidation based solely on investment values is avoidance of the definitional problems discussed earlier with respect to both the equity and cost methods. One escapes the control issue associated with the definition of significant influence by turning to the concept that none of the partners acts independently within the framework of the contract. This seems to represent fairly the situation described above. At the other side of the issue, one is no longer constrained to wait for repayment in product to provide information on an investment as the cost method would require. This option is especially important when in fact a legal contract, presumably enforceable, exists assuring a certain estimable stream of earnings.

A third comment on the suitability of a proportional consolidation method relates to disclosure. If one examines the disclosure requirements for proportional consolidation, one finds precisely the kinds of information made available to the statement reader that would be necessary to evaluate East-West trade compensation agreements. As stated in par. 26(b), "... disclosure should be made in summary form of the venturer's share of the assets, liabilities, income and expenses of the venture" and in par. 30, "Disclosure should be made of contingencies and commitments of the venturer with respect to the joint ventures in which it has an investment." The disclosure of contingencies and commitments is a point of great importance in East-West trade, not only because of the different mix of risks described earlier, but also because the Western firm must look ahead as many as three to five years for product repayments to begin. It is very difficult in today's turbulent markets to do more than make a soft estimate of the present value of a stream of earnings from products expected to be received that far in the future, particularly for financial statement presentation. Yet without an appropriate method for valuing the firm's initial investment, a present-value figure would be the only alternative for disclosure purposes.

ENTITY CHARACTERIZATION FOR U.S. TAX PURPOSES

The characterization of a particular joint venture as a corporation or partnership for tax purposes is a difficult subject in many instances. If a foreign entity is involved, the problems become greater. Partnership status may be more desirable if the objective is to pass through losses or to avoid the corporate level tax. Corporate status may be desired to shelter income. If the foreign venture qualifies as a corporation under U.S. law, the income is not taxed to the U.S. stockholder

until it is distributed. Since U.S. tax is deferred and the tax situation in the Eastern Bloc is often negotiable, reinvestment in the new entity with before-tax dollars is possible. This arrangement can be of considerable aid in beginning a new business.

There are some disadvantages to the corporate form. If earnings are distributed, they are taxed as dividends to the shareholder. If the shareholder is another corporation, the 85 percent dividends-received deduction is available, but the 15 percent is taxed twice. It is also possible for a corporate shareholder to be pushed into personal holding company status because dividends are considered passive income. If the passive income threshold is reached, a penalty tax may be levied on the corporation.[11] If the corporate shareholder is a subchapter S corporation, dividends could cause subchapter S status to be revoked.[12]

If the joint venture is in corporate form, liquidation will trigger taxable gains to the shareholders in the amount of the accumulated earnings. Capital gains treatment on these gains is normally available. Yet the tax is still a second tax on the earnings of the venture.

If the joint venture sustains losses, the participants may deduct the losses currently if the partnership format is adopted. However, if the losing venture has corporate tax status, the losses sustained by the shareholders will be deferred until liquidation. In addition to the disadvantage of loss deferral, liquidation losses are likely to be capital losses. There are limitations on the deductibility of capital losses. For individual shareholders, capital losses are deductible against ordinary income only to the extent of $3,000 per year. For corporations, capital losses in excess of capital gains may not be deducted. A carry-forward is available but may be used only against future capital gains.

The preceding remarks demonstrate that either corporate or partnership tax status may be desirable, depending upon the circumstances. Therefore, a discussion concerning the characteristics relevant in assessing the tax status of a joint venture is necessary. In the regulations, the Internal Revenue Service sets forth six characteristics it considers relevant in determining whether an entity is a corporation or partnership. These corporate characteristics are the following: associates, an objective to carry on business and divide the gains therefrom, continuity of life, centralization of management, liability for corporate debts limited to corporate property, and free transferability of interests.[13]

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[11] Sections 541-547, Internal Revenue Code.
[12] Sections 1371-1378, Internal Revenue Code.
[13] Regs. Sec. 301.7701-2(a)(1), Internal Revenue Code.

The presence or absence of each of these characteristics is to be considered in characterizing an entity. However, since the characteristics of associates and an objective to conduct business and divide gains are common to both partnerships and corporations, the regulations do not consider them in determining tax status. Of the four remaining corporate characteristics, a foreign entity must possess at least three to be treated as a corporation for tax purposes.

Continuity of Life

The regulation at 301.7701-2(b)(1) provides that "an organization has continuity of life if the death, insanity, bankruptcy, retirement, resignation, or expulsion of any member will not cause a dissolution of the organization." Dissolution is defined as "an alteration of the identity of an organization by reason of a change in the relationship between its members as determined under local law." In several cases involving partnerships doing business in Germany, the courts held that an entity does not have continuity of life where local law provides for dissolution of the partnership in the event of the bankruptcy of the corporate general partner.[14]

The Internal Revenue Service (IRS) in Revenue Ruling 77-214 held that a German entity with two *related* shareholders had continuity of life despite a provision in its charter that it would be dissolved upon the bankruptcy of one of its shareholders. The IRS argued that such a charter provision had "significance only if there exist separate interests that could compel dissolution of the organization upon the occurrence of one of the listed events of dissolution." In this case, both shareholders of the German entity were owned by the same corporate parent. Thus, there was no separate entity to force dissolution.

This position of the IRS could present problems for a shareholder in an Eastern Bloc venture who desires corporate tax status because the Eastern government or an agent of that government will usually have a substantial interest in the operation. If the agreement allows dissolution upon the occurrence of one of the events enumerated in the regulation, the IRS could hold that the continuity of interest characteristic is not present. In Yugoslavia, for example, if a U.S. firm contributes its technology to a newly created Yugoslav entity, it can receive a 49 percent pseudoequity interest in the operation. If the IRS is successful in arguing against the presence of continuity of interest, the U.S. firm

[14] *P. G. Larson,* 66 TC 159(1976), acq. Sec. Rev. Rul. 79-106, IRB 1979-12; *G. Zuckman,* 524 Fed 729 (Ct.Cl. 1975) (36 AFTR 2d 75-6193, 75-2 USTC 9778).

will be treated as a partnership for tax purposes if one other corporate characteristic fails to stand up to scrutiny.

Centralization of Management

The regulations provide:

An organization has centralized management if any person (or any group of persons which does not include all the members) has continuing exclusive authority to make the management decisions necessary to the conduct of the business for which the organization was formed.[15]

An entity in an Eastern Bloc country may have centralized management by statutory definition or by business custom. This characteristic of corporate status would not be violated by persons outside the organization.[16] Thus, if the government or an agency of the government possesses the ultimate authority to make management decisions, centralized management will presumably exist. Although there are no cases or rulings to date on Eastern Bloc entity characterization, centralization of management by statutory definition was present in the German entity of Revenue Ruling 77-214.

Limited Liability

The regulations provide:

An organization has the corporate characteristic of limited liability if under local law there is no member who is personally liable for the debts of or claim against the organization. Personal liability means that a creditor of an organization may seek personal satisfaction from a member of the organization to the extent that the assets of such organization are insufficient to satisfy the creditor's claim.[17]

A joint venture agreement, Eastern European style, will most likely limit the liability of the U.S. partner to the amount of the original contribution as in the Yugoslav example cited earlier.

Free Transferability of Interests

The regulations provide:

An organization has the corporate characteristic of free transferability of interests if each of its members or those members owning substantially all of the interests in the organization have the power, without the consent of other members, to substitute for themselves in the same organization a person who is not a member of the organization.[18]

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[15] Regs. Sec. 301.7701-2(c) (1), Internal Revenue Code.
[16] Ibid.
[17] Regs. Sec. 301.7701-2(d)(1), Internal Revenue Code.
[18] Regs. Sec. 301.7701-2(e)(1), Internal Revenue Code.

There are several potential traps here for an entity seeking corporate status. First, if the agreement with the Eastern partner allows no transferability, the corporate characteristic is not met. Second, if a member can assign his right to profits but not his right to participate in management, free transferability does not exist. Third, if under local law a transfer of a member's interest results in the dissolution of the old organization and formation of a new organization, free transferability does not exist.[19] Fourth, if one of the parties has the right of first refusal before the other party can sell his interest, the regulations provide that a "modified form of free transferability exists." Thus, this modified corporate characteristic will be accorded less significance than would the characteristic in unmodified form.[20] If the Eastern Bloc partner has the right of first refusal, this means that the free transferability characteristic will be present in a weakened form.

CURRENT POSITION OF THE INTERNAL REVENUE SERVICE

The Internal Revenue Service has a tendency to characterize foreign entities such as the German GmbH as a corporation under Revenue Ruling 77-214 because a U.S. taxpayer has control. This control aspect means the key characteristics of continuity of life and free transferability of interests are considered present. Thus, in control situations, it appears to be very difficult to obtain partnership status. The Internal Revenue Service is currently rethinking its position in this area. Tax practitioners have informed the authors of several private ruling requests in this area which are being delayed while the IRS rethinks its position. Although there are no rulings on Eastern Bloc joint ventures, the current position of the IRS would seem to make it easier to obtain partnership status for ventures not controlled by U.S. firms. It is important to remember that the regulations require three of the four characteristics for *corporate* status. Thus, if only two of the characteristics are not present, the entity will be characterized as a partnership. However, if corporate status is desired, the absence of control by the U.S. partner in an Eastern Bloc joint venture may be a hurdle. Prediction in this area is problematic both because of the absence of rulings on Eastern Bloc arrangements and the IRS's uncertainty in the area of entity characterization.

If corporate status is desired for a particular entity, a private ruling

[19] Ibid.

[20] Regs. Sec. 301.7701-2(e)(2).

should be sought under IRS code section 367 which in essence states that for purposes of the nonrecognition of gain on the transfer of property to a foreign corporation, the foreign corporation will not be considered a corporation unless the Internal Revenue Service grants permission. Thus, the authority to tax such a transfer is vested in the Internal Revenue Service. Consequently, a favorable ruling is vital.

THE "OPEN-END TRANSACTION DOCTRINE"

If a favorable Section 367 ruling is not forthcoming, perhaps because the IRS feels a major reason for the property transfer is tax avoidance, there is a tax doctrine that could at least defer the tax impact. An "open-end" sale results when the seller receives a claim which has no ascertainable fair market value. Thus, if the amount of the future payments depends upon unforeseeable circumstances or contingencies, the contract may have no determinable fair market value for tax purposes. The gain in such a case may not be taxed until the payments exceed the cost or basis of the property. A Supreme Court case, *Burnett* v. *Logan, et al.,* is the leading case in this area. It establishes the principle that where fair market value cannot be ascertained with reasonable certainty because of the presence of contingent factors, the taxpayer will be entitled first to recover his capital investment before incurring income tax liability.[21]

Whether a contract has an ascertainable fair market value depends on the facts in each case. The burden of proof is on the taxpayer to prove that the value of the contract is indeterminate.[22] Apparently, it is somewhat difficult to convince the Internal Revenue Service that an "open-end" transaction has occurred. The commissioner has announced that he will require valuation of contracts to receive indefinite amounts of income except in rare and extraordinary cases.[23]

There are no cases or rulings to date in which the open-end transaction doctrine has been applied in an East-West trade agreement. However, conversations with practitioners reveal that this doctrine is being applied to defer gain in East-West transactions particularly on agreements where Western firms are to take future production from an Eastern party. Factors which would appear to buttress this position

[21] *Burnet* v. *Logan,* 2 USTC 736, 283 U.S. 404.
[22] *J. W. Chamberlain* (CA-&)61-1 USTC 9109 286 F.2d 850, Cert. den. 368 U.S. 820; *General Insurance Agency, Inc.,* 26 TCM 656 1967-143; *H. Kaufman* (CA-4) 66-2 USTC 9756, 372 F.ed 789.
[23] Rev. Rul. 58-402, 1958-2, CB 15, Internal Revenue Code.

include the following contingencies: potential price changes, competitive world market conditions, large variations in the quality of products received, and possible economic consequences of political rivalries.

If the Internal Revenue Service does not grant a favorable ruling on the transfer of property to a foreign entity, the open-end doctrine may apply. The consideration would have to be contingent, for example, upon contract fulfillment by the foreign entity or extremely difficult to value. If the IRS taxes the transfer, it would have to put a value on the consideration received. If an asset such as a patent were transferred and the agreement called for the U.S. partner to take a certain portion of future production, the U.S. partner could argue that the value of the consideration for the patent is contingent because of some or all of the factors enumerated above. If the U.S. partner took such a tax position, there would be no tax liability on the transfer until the value of the products received exceeded the U.S. partner's cost in the patent. This is known as the capital recovery rule because tax is deferred until the capital (adjusted basis is the asset) is recovered.

CAPITAL GAINS

If the Internal Revenue Service succeeds in taxing the transfer of property, the question arises whether the gain will be capital or ordinary. Capital gains treatment may be available if patents or know-how are transferred.[24] The IRS has attempted to limit capital gains treatment to patents, but the Tax Court has held that payments for the transfer of an unpatented invention were capital gains. The IRS acquiesced in that decision.[25] Secret formulas and trade names also may be sufficiently similar to patents to warrant the application of the body of law relating to the transfer of patent rights.[26]

Capital gain benefits under Section 1235 apply only if "all substantial rights" are transferred. The substantial rights secured by a patent are these: (1) to make, (2) to use, and (3) to sell the patented article or device for the entire life of the patent. If ony one, or a part of any one, or more of these three substantial rights are retained, then a sale or exchange has not occurred and capital gains benefits are unavailable.[27] A geographical limitation outside the United States will ap-

[24] Sec. 1235 I.R.C.; Regs. Sec. 1235.; Regs. Sec. 1.1235-2(b),(c), Internal Revenue Code.
[25] *F. S Spercher,* 28 TC, 938 (Acq.).
[26] *J. H. Pickren* (CA-5)67-2 USTC 9477, 378 F.ed 595.
[27] *L. G. Buckley* (DC) 57-1 USTC 9525; *W. W. Taylor,* 29 TCM 1488, 1970-325; *The Taylor-Winfield Corp.,* CA-6, 73-1 USTC 9113 467 F.2d 483.

parently not cause the "all substantial rights" criterion to be violated.[28]

If the transferor is not the sole owner of the patent, capital gains benefits are still available so long as an "undivided interest" is transferred. An undivided interest is a fraction of the whole patent and a share in *each* of the rights to the income from a patent, a license limited geographically or a license covering less than all of the valuable claims or uses covered by the patent. A transfer for a period less than the remaining life of the patent is not a transfer of an undivided interest in all substantial rights to a patent.[29]

The special benefits under Code Sec. 1235 do not apply to transfers of patents by "nonholders." Thus, the tax consequences of the sale of patents by nonholders, such as corporations or the inventer's employer, are governed by other provisions of the code. Thus, if a patent is a capital asset under Section 1221, capital gains treatment is available if a sale or exchange has occurred. Similarly, if a patent is used in a trade or business, capital gain could be realized under Code Sec. 1231 from the sale or exchange of depreciable property use in the trade or business. Patents are Section 1245 property, so no ordinary income recapture will erode the capital gain benefits of Section 1231. If the patent is held for sale in the normal course of business, the gain will be ordinary under Code Sections 61 and 1221, assuming Section 1235 does not apply.[30]

Services in connection with the transfer of a patent or invention may result in ordinary income, particularly if they are a major item or are separately stated in the contract. The question is a factual one in each case. In *H. S. Gable,* the Tax Court found the taxpayer's developmental work relative to the transfer of his patent to be eligible for capital gains treatment because only technical problems remained at the time of transfer. In elaborating this criterion, the court noted that the work done was related to the development and implementation of the particular invention rather than the general advancement of the purchaser's business.[31] Thus, the services performed should be directly related to the invention, or the agreement will appear to involve compensation for services unrelated to the invention transfer. However, if the patented device is technical and intricate, some advisory services are assumed to be incidental to the transfer.[32]

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[28] Regs. Sec. 1.1235-2(b)(i), Internal Revenue Code.
[29] Regs. Sec. 1.1234-2(c), Internal Revenue Code.
[30] *C. A. Rose,* DC, 75-1 USTC 9183.
[31] *H. S. Gable,* 33 TCM 1427, 1974-312.
[32] *R. M. Hessert,* 6 TCM 1190.

International Reporting Aspects of Segment Disclosure

JERRY ARNOLD, WILLIAM W. HOLDER, and M. HERSCHEL MANN*

Although U.S. companies have engaged in foreign activity for many years, accounting policy setters have only recently required disclosure of such activity by geographic area. In December 1976, the Financial Accounting Standards Board (FASB) promulgated *Statement of Financial Accounting Standards No. 14* (SFAS), "Financial Reporting for Segments of an Enterprise." Among other things, SFAS No. 14 mandated companies to disclose foreign activity for each "significant foreign geographic area," marking the first time that disclosures of disaggregated information on foreign activity were required. Prior to the adoption of SFAS No. 14, the only disclosure requirements related to foreign activities were those Accounting Research Bulletin (ARB) No. 43, "Restatement and Revision of Accounting Research Bulletins," related to foreign subsidiaries and those of the Securities and Exchange Commission, which specified that the aggregate volume of foreign activity be disclosed by those companies whose securities were publicly traded.[1]

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The authors wish to express their appreciation to Professor Michael Diamond for his helpful comments on an earlier draft of this paper.

[1] For a complete history of segment disclosure requirements prior to SFAS No. 14, see Financial Accounting Standards Board, "Financial Reporting for Segments of a Business Enterprise," Discussion Memorandum (Stamford, Conn.: FASB, 1975). Professional interest in this topic continues to be substantial. For example, the International Accounting Standards Committee has issued for comment an exposure draft of a proposed standard. Exposure Draft 15, "Reporting Financial Information by Segment" was issued in late 1979 with comments due by September 30, 1980.

The fact that SFAS No. 14 was the first standard to require information concerning geographic areas afforded the FASB a "golden opportunity" to lay the groundwork for such disclosure. In an analogous situation involving alternative accounting possibilities for the investment tax credit, Moonitz noted that the lack of "substantial authoritative support" provided the policy-setting body with a clean slate in selecting a standard of accounting and reporting.[2] In reference to SFAS No. 14, the FASB clearly faced a clean slate in addressing the issues of segmentation by geographic area.

The underlying decision confronting the FASB was whether to prescribe the basis of segmentation in a highly precise fashion, thereby imposing a uniform definition on all companies, or to defer to the judgment of management, thereby allowing some discretion in the election of the appropriate classification scheme. The board opted for the latter alternative, noting that

> . . . foreign *geographic areas* are individual countries or groups of countries as may be determined to be appropriate *in an enterprise's particular circumstances.* No single method of grouping the countries in which an enterprise operates into geographic areas can reflect all of the differences among international business environments. Each enterprise shall group its foreign operations on the basis of differences that are *most important in its particular circumstance.*[3] [Emphasis added]

In addition to inherent differences in circumstances across entities, the FASB could have based its position on the argument that when first venturing into a new area, a policy setter should proceed slowly. This approach would allow the development of a support base in practice. Interestingly, this perspective seemed to motivate the SEC in adopting pre-SFAS No. 14 requirements for foreign activity disclosures. Indeed, the initially proposed SEC rules would have required a disaggregation by geographic area;[4] however, after receiving comments and suggestions, the commission omitted such disclosures from the final requirements.[5] Further, history suggests that prescriptive stan-

[2] Maurice Moonitz, "Obtaining Agreement on Standards in the Accounting Profession," *Studies in Accounting Research #8* (Sarasota, Fla.: American Accounting Association, 1974), p. 46.

[3] Financial Accounting Standards Board, "Financial Reporting for Segments of a Business Enterprise," *Statement of Financial Accounting Standards No. 14* (Stamford, Conn.: FASB, 1974), pp. 17-18.

[4] Securities and Exchange Commission, Release Nos. 4922 and 8397 (Washington, D.C.: Government Printing Office, 1968).

[5] Securities and Exchange Commission, Release Nos. 4988 and 8650 (Washington, D.C.: Government Printing Office, 1969).

dards can encounter serious difficulties in building a support base, thus damaging or even negating the policy.[6]

Notwithstanding the logic supporting the FASB's decision to allow judgment in segmenting foreign activity, a critical issue relates to the practical experience with this standard. That is, given that companies have discretion in defining geographic areas, it is not clear on an a priori basis what level of disaggregation exists in practice. The purpose of this paper is to investigate this question empirically.

The results of this endeavor should be of interest to the FASB and financial statement users alike. With the evidence provided by this study, the FASB can evaluate whether the level of disaggregation found in practice is consistent with its expectations when the standard was adopted. Further, empirical research conducted prior to the adoption of SFAS No. 14 indicated that, in general, disclosure of segment information improved a user's ability to predict the future earnings of multisegment firms.[7] Consistently, Collins and Simonds found in analyzing stock market reaction to SEC-required segment disclosures that "... firms with minimal or no prior segmented disclosure did experience substantial changes in relative risk within the designated critical SEC LOB (line of business) disclosure period."[8] Thus, there is some evidence that disaggregated data on an industry basis provides useful information to investors.

Although no empirical test of the usefulness of geographically segmented data has been performed, it seems reasonable on an a priori basis that users would also be interested in this data. The FASB accepted this premise by noting:

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[6] Examples of such situations include accounting for the investment tax credit, oil and gas producing companies, and foreign-currency activity translation.

[7] See, for instance, D. W. Collins, "Predicting Earnings with Sub-Entity Data: Some Further Evidence," *Journal of Accounting Research* (Spring 1976): 163-77; R. Kochanek, "Segmental Financial Disclosure and Security Prices," *Accounting Review* (April 1974): 245-58; and W. Kinney, Jr., "Predicting Earnings: Entity vs. Sub-Entity Data," *Journal of Accounting Research* (Spring 1971): 127-36.

[8] D. W. Collins and R. R. Simonds, "SEC Line-of-Business Disclosure and Market Risk Adjustment," *Journal of Accounting Research* (Autumn 1979): 352-83. The conclusion that the stock market reacted to disclosure of segment data is not unchallenged, however. Based on the results of their own study, Horwitz and Kolodny concluded that no such reaction occurred. For more details, see B. Horwitz and R. Kolodny, "LOB Reporting and Security Prices: An Analysis of an SEC Disclosure Rule," *Bell Journal of Economics* (Spring 1977): 234-49.

> ... the purpose of the information required to be disclosed ... about an enterprise's operations in ... different areas of the world and about the extent of its reliance on export sales ... is to assist financial statement users in analyzing and understanding the enterprise's financial statements by permitting better assessment of the enterprise's past performance and future prospects.[9]

This study will inform users as to the current *level* of geographic disaggregation found in practice and thereby assist them in planning their analysis and cross-company comparisons. However, prior to consideration of the methodology and results of the study, a brief discussion of the technical requirements of SFAS No. 14 in regard to foreign activity is desirable.

SFAS NO. 14: A TECHNICAL STANDARD

SFAS No. 14 establishes four types of business segments, provides criteria for determining which, if any, of these segments are reportable and are to be included in the financial statements, and mandates the information to be disclosed for each reportable segment of a business enterprise. The four types of business segments established by SFAS No. 14 are (1) industry line; (2) foreign operations; (3) export sales; and (4) major customers.

Since the purpose of this article involves an analysis of reporting for international activities, it will be concerned primarily with the second and third types of business segments. While the fourth type of reportable business segment, major customers, may include major foreign customers, this segment is not considered extensively here because it (1) is relatively straightforward, and (2) has been recently modified by SFAS No. 30, "Disclosure of Information about Major Customers," which alters the applicable definitions of major customers, especially in regard to foreign governments.

Briefly, under SFAS No. 14, a major customer is one from which the reporting entity derives 10 percent or more of its gross revenue, and foreign governments *in the aggregate* were considered in applying this test. Under SFAS No. 30, *each* foreign government is to be considered individually in applying the "10 percent" threshold. Interestingly, the *names* of the governments are not required to be disclosed under SFAS No. 14 or No. 30. Since SFAS No. 30 is effective for periods beginning after December 15, 1979, and requires no early or retroactive application, its effects will not become fully operational and reportable for some time.

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[9] *Statement of Financial Accounting Standards No. 14,* p. 34.

However, financial reporting requirements for business activities involving foreign operations and export sales have remained constant since the promulgation of SFAS No. 14 and are somewhat more complex and difficult to apply. SFAS No. 14 defines *foreign operations* as those

> revenue-producing operations . . . that (a) are located outside of the enterprise's home country . . . , and (b) are generating revenue either from sales to unaffiliated customers or from intra-enterprise sales or transfers between geographic areas.[10]

Exhibit 1 summarizes the specific criteria to be applied in determining whether disclosure of foreign operations is necessary.

The latitude in application of those requirements stems predominantly from the technical definition of geographic area. As previously noted, SFAS No. 14 provides that geographic areas may be

> . . . individual countries or groups of countries as may be determined to be appropriate in an enterprise's particular circumstances. . . . Each enterprise shall group its foreign operations on the basis of the differences that are most important in the particular circumstances. . . .[11]

To assess and compare effectively the impact of foreign operations on different companies, the analyst/investor should be familiar with the diversity that results from varying interpretations of this definition.

SFAS No. 14 defines export sales as "sales to customers in foreign countries."[12] Exhibit 2 describes the technical criteria applied in isolating reportable export sales.

Finally, exhibit 3 summarizes the necessary disclosures for both foreign operations and export sales when such activities meet the previously discussed criteria as reportable segments.

Inspection of exhibit 3 reveals that extensive disclosures are required concerning an entity's foreign activities and that each element of disclosure involves selection of appropriate geographic areas.

METHODOLOGY OF THE STUDY

The methodology of this research study involved an analysis of the segment disclosure information contained in 1978 form 10-K reports filed with the Securities and Exchange Commission. Only the information contained within the financial statements, related footnotes, and referenced schedules included in the audit report was used in the

[10] Ibid., p. 16.
[11] Ibid., pp. 17-18.
[12] Ibid., p. 18.

Exhibit 1. Foreign Operations Disclosures

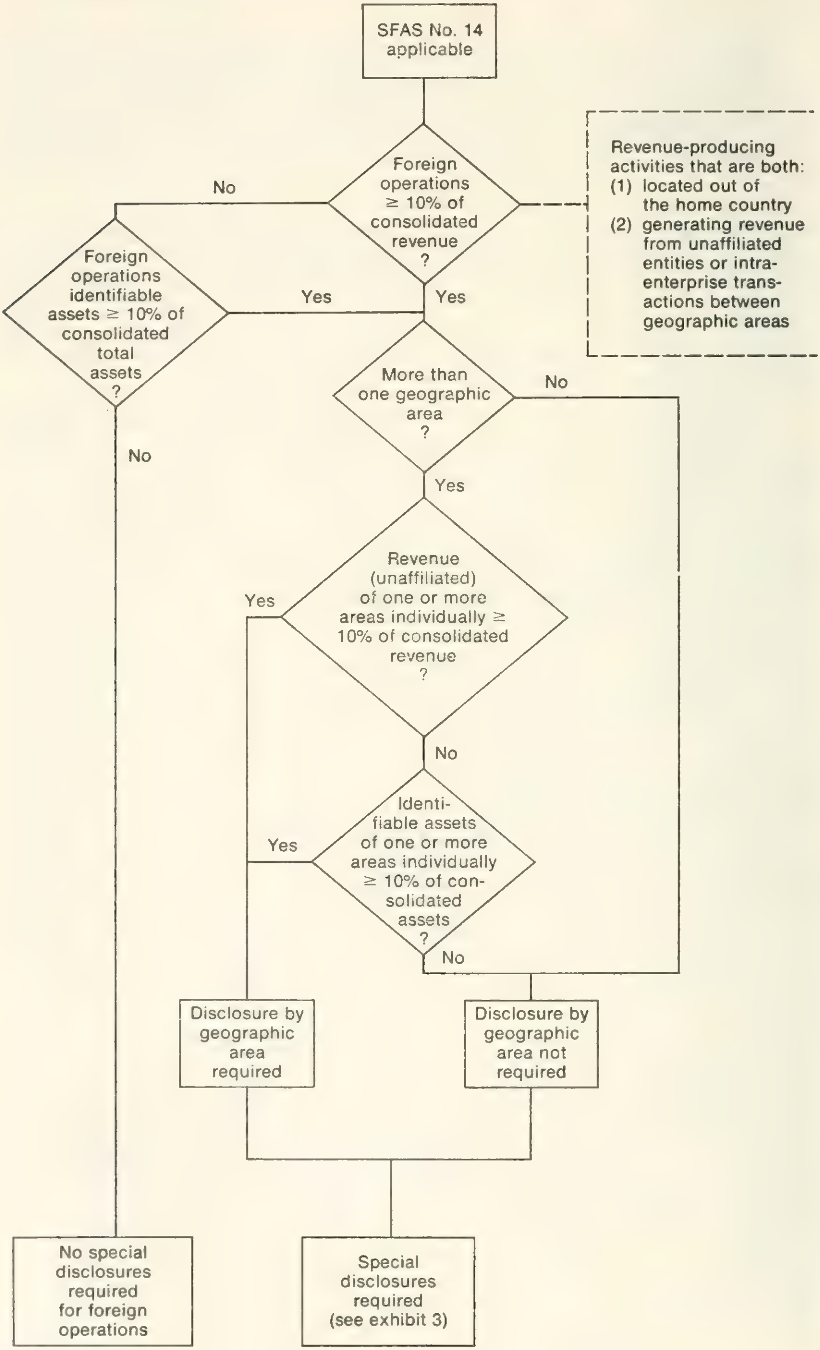

Exhibit 2. Export Sales Disclosures

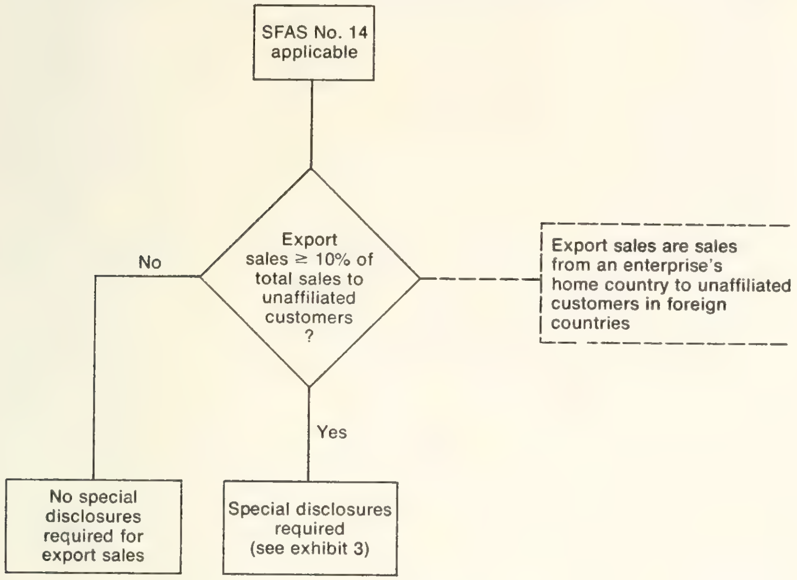

Exhibit 3. Segment Reporting Disclosure Requirements

Disclosure requirements	Foreign/Domestic operations	Export/Domestic sales
Identifiable assets[1]	Carrying amount in the aggregate or by geographic area, if appropriate	None
Revenue[2]	Aggregate or by geographic area if appropriate	Aggregate and geographic as appropriate
Profitability[3]	Operating profit/loss *or* net income *or* other profitability measure; must be common measure for all geographic areas	None

[1] Tangible or intangible assets used exclusively by or allocated to a segment. Does not include general corporate assets or intersegment advances and loans in most cases.
[2] Sales to unaffiliated customers and other segments. Basis of accounting for intersegment sales must be disclosed as well as nature and effect of any changes. Does not include interest earned on intersegment loans.
[3] Revenue [defined in note 2], less operating expenses, both direct and allocated. Does not include revenue and expenses of corporate level, interest, income taxes, equity in income of investee, discontinued operations, extraordinary items, or effect of accounting changes.

study, since the issues studied represent requirements of SFAS No. 14. Therefore, information contained in such items as the president's letter or the highlights section of the reports was not accepted for analysis unless it was included in the financial statements by explicit reference. A sample of 200 of the 1978 forms 10-K of *Fortune* 500 companies was selected for the purposes of this study.[13]

For each company, it was determined whether or not foreign activities were disclosed, and if so, the nature of such activities (that is, export sales/foreign operations). Further, for those companies reporting foreign activity, the disclosures were classified based upon the degree of disaggregation of the geographic data. Specifically, the geographic disclosure categories established included (1) country; (2) subcontinent (Far East, Western Europe); (3) continent; (4) global; (5) other (as a specific classification); and (6) unique (for example, Americas and Australia).

The following portion of this article presents the findings of the study and provides certain observations. Conclusions based upon the findings are then drawn.

RESULTS OF THE STUDY

Analysis of the sample 10-K reports revealed that while over 65 percent of the companies disclosed foreign operations data, less than 25 percent disclosed export sales. Exhibit 4, presented here, reflects this information.

Exhibit 4. Companies Disclosing Foreign Operations

Companies	*Foreign operations*		*Export sales*	
	No.	*%*	*No.*	*%*
Companies disclosing	131	65.5	47	23.5
Companies not disclosing	69	34.5	153	76.5
Total reviewed	200	100.0	200	100.0

Exhibit 5 considers only those companies that disclosed foreign operations or export sales. In this exhibit, the disclosing companies are divided into those using one consistent category of disclosure (such as country) and those using more than one level. It is interesting to note that most companies (64 percent) reporting foreign operations use

[13] For details concerning the selection and composition of the sample, please contact the authors directly.

Exhibit 5. Types of Disclosures

Disclosure types	*Foreign operations*		*Export sales*	
	No.	*%*	*No.*	*%*
Single classification	47	35.9	36	76.6
Multiple classification	84	64.1	11	23.4
Total disclosing	131	100.0	47	100.0

multiple geographic classification levels while most companies (77 percent) reporting export sales use a single classification level.

However, as exhibit 6 reflects, a preponderence of the companies using a single classification level merely reflects that such activities are arising on a global basis and do not provide substantial information about the specific geographic areas in which the foreign operation/export sales activities are taking place. It is significant to note that fewer than 25 percent of those using a single classification level for foreign operations and fewer than 3 percent for export sales chose to disclose by individual country.

Exhibit 7 reflects greater diversity for those companies using a multiple level classification scheme. The "percentage of disclosures" column provides a frequency distribution for comparing the relative popularity of each geographic level. For example, of the total 203 elements of foreign operations disclosure provided by the eighty-four companies, 16 percent were by country.

The "percentage of companies" column represents the percent of the eighty-four companies reporting foreign operations through multiple geographic classifications which chose to disclose each level. Obviously, 100 percent represents the maximum for each level disclosed; therefore, the percentages are not additive. Rather, they reflect the

Exhibit 6. Detailed Analysis of Disclosures of Single Classification Companies*

Classification	*Foreign operations*		*Export sales*	
	No.	*%*	*No.*	*%*
Country	11	23.4	1	2.8
Subcontinent	2	4.2	1	2.8
Continent	2	4.2	1	2.8
Global	32	68.2	33	91.6
Total	47	100.0	36	100.0

* Forty-seven and thirty-six companies reporting, respectively.

Exhibit 7. Detailed Analysis of Disclosures of Multiple Classification Companies*

Classification	*Foreign operations*			*Export sales*		
	No.	*% of disclosures*	*% of companies*	*No.*	*% of disclosures*	*% of companies*
Country	33	16.3	39.3	5	16.2	45.5
Subcontinent	36	17.7	42.9	7	22.6	63.6
Continent	47	23.2	56.0	6	19.3	54.5
Other (as class.)	63	31.0	75.0	6	19.3	54.5
Unique	24	11.8	28.6	7	22.6	63.6
Total	203	100.0		31	100.0	

* Eighty-four and eleven companies reporting, respectively.

portion of the eighty-four companies selecting the given category. For example, thirty-three (39 percent) of the companies used individual countries as one category, and no geographic category was used by fewer than twenty-four (29 percent) companies. The diversity in the level of geographic disaggregation is clear for companies reporting foreign operations and for those disclosing export sales.

Exhibit 8 combines the single and multiple disclosure-level companies that were individually reflected in exhibits 6 and 7. The columns represent the same logic as in exhibit 6, but consider all disclosing companies.

The data in exhibit 8 reflect that only about one-third of the companies disclosing foreign operations employ the geographic level of country. Further, the "percentage of disclosures" column indicates that

Exhibit 8. Detailed Analysis of Disclosures and Relative Frequency of Classifications*

Classification	*Foreign operations*			*Export sales*		
	No.	*% of disclosures*	*% of companies*	*No.*	*% of disclosures*	*% of companies*
Country	44	17.6	33.6	6	9.0	12.8
Subcontinent	38	15.2	29.0	8	11.9	17.0
Continent	49	19.6	37.4	7	10.4	14.9
Global	32	12.8	24.4	33	49.3	70.2
Other (as class.)	63	25.2	48.1	6	9.0	12.8
Unique	24	9.6	18.3	7	10.4	14.9
Total	250	100.0		67	100.0	

* All 131 and 47 companies reporting, respectively.

only 32.8 percent (17.6 + 15.2) of all disclosures were either by country or subcontinent. All other disclosures were less descriptive as to particular geographic area.

For export sales, the disclosures provided were even less precise than those for foreign operation. Only 20.9 percent (9.0 + 11.9) of all the disclosures were either by "country" or "subcontinent," and only about 13 percent of the companies selected "country" as one level of disclosure. However, SFAS No. 14 requires disaggregation only "as appropriate," which might explain the tendency toward less disaggregation.

CONCLUSIONS

Based upon the results of the study, it is quite obvious that a great deal of diversity exists in practice in regard to disclosure of foreign activities. As indicated in exhibit 8, there is evident a tendency not to disclose foreign activities at the subcontinent or country level. It is questionable, however, whether more aggregate measures will assist users adequately. The FASB seemed to share this doubt by indicating that criteria to be used in selecting appropriate geographic areas should include such items as proximity, economic affinity, and similarity in business environment. These factors tend to imply a need for greater disaggregation than a single global category or even by continent except in unusual circumstances, such as is the case with Australia. Therefore, the implicit intent of the FASB may not be achieved as SFAS No. 14 is operationalized today in respect to disclosing foreign activity.

Several possible reasons for this are evident: (1) few companies have 10 percent of their total activity located in a single country or subcontinent; or (2) companies are *choosing* to aggregate at a broader geographic level.

However, in either instance, SFAS No. 14 has not resulted in an adequately narrow operational definition of geographic area. Such data is important due to political (for example, expropriation) and economic (for example, currency exchange and translation) implications. It therefore seems clear that SFAS No. 14 should be modified to insure the provision of more detailed information on foreign activities. Among the desirable modifications would be a requirement for the disclosure of all countries in which 10 percent (or even less) of total revenue is produced and to require greater disaggregation of export sales. In any event, it would seem appropriate for the FASB to add a reconsideration of the foreign activity sections of SFAS No. 14 to its agenda.

Internationalization of the Accounting Curriculum

STEVEN M. MINTZ*

The decades of the 1960s and 1970s have been years of rapid growth in international investment. Direct investment in foreign affiliates by U.S. corporations is defined as the ownership of 10 percent or more of a foreign concern. These direct investors had equity in and outstanding loans to foreign affiliates of $168.08 billion in 1978. This represented a 12.2 percent increase over 1977. The 1978 increase followed a 9.5 percent rise in 1977 to $149.85 billion.[1]

The increase in business operations and overseas investments of U.S. multinationals has been an important factor contributing to the growth in the number of international business courses offered in universities. As course offerings in international business increased, a growing awareness of the importance of international accounting has led to an increase in the number of courses offered in this area as well.

OBJECTIVE

The objective of this paper is to examine the current role of international accounting in the university curriculum and to present recommendations for the internationalization of the accounting curriculum.

LITERATURE

During the past few years, there have been a number of surveys conducted to determine the existence of courses in international account-

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[1] "Direct U.S. Investment Abroad Jumped 12.2% to $168.08 Billion in '78," *Wall Street Journal*, 28 August 1979, p. 5.

ing. In 1969, Terpstra conducted a survey of education in international business.[2] He found that of ninety-five schools responding to the survey, seventeen offered courses in international accounting. In 1973, Dascher, Smith, and Strawser conducted a survey of the American Assembly of Collegiate Schools of Business (AACSB) member schools.[3] Of ninety schools replying, twenty-seven offered courses in international accounting while seven have plans to do so.

In 1978, Jane Burns, former chairperson of the Education Committee of the International Section of the American Accounting Association (AAA), conducted a study of international accounting education for the section.[4] She surveyed sixty-two academic members of the International Section and eighty-nine departmental chairpersons of AASCB schools with ten or more professorial-rank faculty members. Of the 151 schools surveyed, 37 were currently offering a course in international accounting, and 24 more expected to offer one within three years.

A comparison of the results of these three surveys clearly indicates an increase in the number of courses offered in international accounting.

Year	Study	Courses offered	Courses expected to offer
1969	Terpstra	17	not available
1973	Dascher	27	7
1978	Burns	37	24

Other factors have contributed to the growth in the number of courses offered. For example, during the past several years, increasingly more time has been devoted to the discussion of problems in international accounting at professional conferences, there has been an expansion of the literature dealing with international accounting topics, and professional groups have been established to study important issues in the field.

Every five years a meeting of the International Congress of Accountants is held, the last of which was in Munich, West Germany, in

[2] Vern Terpstra, *University Education for International Business* (Association for Education in International Business, 1969).

[3] Paul E. Dascher, Charles H. Smith, and Robert H. Strawser, "Accounting Curriculum Implications of the Multinational Corporation," *International Journal of Accounting* (Fall 1973): 81-98.

[4] Jane O. Burns, "A Study of International Accounting Education in the United States," *International Journal of Accounting* (Fall 1979): 135-45.

October 1977. At these meetings, representatives of the professional organizations in most of the developed and many of the developing countries gather to discuss common problems relating to the practice and conduct of the profession.[5] Valuable information on accounting and financial reporting problems in countries throughout the world is presented.

For the past two decades, there has been an increase in the literature available in the field of international accounting. Articles have appeared in many different journals. CPA firms have published very valuable information on accounting procedures and financial reporting practices in individual countries. Within the past four years, no less than four books on international accounting have been published. Each one is, at least in part, suitable for classroom use in teaching the subject matter.[6] In addition, *A Bibliography of International Accounting* provides references to articles published in many areas of international accounting and listings of publications by geographical location.[7] While instructors of courses in international accounting may still have some problems gathering information needed to teach courses, the availability of useful information is much greater than in past years.

Another significant factor contributing to the growth in international accounting education is the work of the Center for International Education and Research in Accounting located at the University of Illinois. It was established in 1962 with the primary purpose of fostering the international development of education and research in accounting.[8] Annual conferences focus on different problem areas of in-

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[5] Paul Garner, *The Development of International Accounting Standards and Conventions — Past Accomplishments and Future Potentials and Strategies,* Monograph Series No. 1 (University, Alabama: Center for Business and Economic Research, March 1973).

[6] They include Norlin G. Rueschhoff, *International Accounting and Financial Reporting* (New York: Praeger Publishers, 1976); Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978); Dhia D. AlHashim and James W. Robertson, eds., *Accounting for Multinational Enterprises* (Indianapolis: Bobbs-Merrill, 1978); and George C. Watt, Richard M. Hammer, and Marianne Burge, *Accounting for the Multinational Corporation* (New York: Financial Executives Research Foundation, 1977).

[7] Konrad W. Kubin and Gerhard G. Mueller, *A Bibliography of International Accounting,* rev. ed. (Seattle: University of Washington International Accounting Studies Institute, 1973).

[8] Hanns-Martin Schoenfeld, "International Influences on the Contemporary Accounting Curriculum: International Accounting Instruction at the University of Illinois at Urbana-Champaign," *International Journal of Accounting* (Fall 1974): 71-85.

ternational accounting. The Center publishes a biannual periodical, *The International Journal of Accounting,* which is the primary periodical in accounting devoted to international issues.

Finally, the International Section of the AAA is involved in the collection of information and the promotion of education, research, and communication in many areas of international accounting. Members of the section undertake special projects which have dealt, in the past, with such topics as faculty exchanges and continuing education. The first major publication of the section was a collection of fifteen outstanding articles representative of research conducted in the field of international accounting.[9]

SURVEY

For the academic year 1978-79, the author was appointed to chair the Subcommittee of the Education Committee of the International Section of the AAA, the objective of which was to collect course outlines in international accounting. The author conducted a survey to determine the construction and content of courses in international accounting and international taxation. In order to gather the data, a questionnaire[10] was mailed to two groups: Group I, academic members of the International Section of the AAA; and Group II, departmental chairpersons of those schools either having a course in international accounting or international taxation in their current curricula or, if not, those schools offering a degree program in international business.[11]

Responses

Replies were received from ninety-eight (67.1 percent) of the schools (see exhibit 1). Forty-two of the ninety-eight schools offer one course, and two schools offer two courses. Of the forty-two schools, three offered their course in international taxation, while one of the two schools offering two courses offered its courses in international taxation. All other courses were offered in international accounting. Sixteen

[9] Selected by the International Accounting Section of the American Accounting Association, *Notable Contributions to the Periodical International Accounting Literature — 1975-78* (Sarasota, Fla.: American Accounting Association, 1979).

[10] The questionnaire used was developed by Jane Burns in her study of international accounting education.

[11] The sources used for the selection of Group II schools were surveys of international business education conducted for the Academy of International Business by Terpstra, *University Education for International Business,* and John D. Daniels and Lee H. Radebaugh, *International Business Curriculum Survey* (Academy of International Business, 1974).

Exhibit 1. Responses to the Questionnaire

Does your school have one or more international accounting or international taxation courses?	*Group I* No.	*Group I* Percentages		*Group II* No.	*Group II* Percentages		*Total* No.	*Total* Percentages	
Yes	33	34.0	47.8	11	22.4	37.9	44	30.1	44.9
No, but expect to add one in next three years	14	14.4	20.3	2	04.1	06.9	16	11.0	16.3
No, and do not expect to add one in next three years	22	22.7	31.9	16	32.7	55.2	38	26.0	38.8
Subtotal	69	71.1	100.0	29	59.2	100.0	98	67.1	100.0
No response	28	28.9		20	40.8		48	32.9	
Total	97	100.0		49	100.0		146	100.0	

schools expect to add a course to the curriculum in the next three years. These schools did not clearly indicate whether the course would be offered in international accounting or international taxation. Thirty-eight schools do not expect to offer a course in the next three years.

Level of Offering

Of the forty-six courses included in this study, thirty-one are primarily for graduate students, eight primarily for undergraduate students, and seven are available to both graduate and undergraduate students. Of the sixteen schools expecting to offer a course in the next three years,

Exhibit 2. Level of Offering

Does your school have one or more international accounting or international taxation courses?	*Graduate* No.	*Graduate* %	No.	%	*Graduate and Undergraduate* No.	*Graduate and Undergraduate* %	*Total* No.	*Total* %
Yes	31	67.4	8	17.4	7	15.2	46	100.0
No, but expect to add one in next three years	5	35.7	5	35.7	4	28.6	14	100.0

fourteen were able to indicate the expected level of offering. Five will be offered primarily to graduate students, five primarily to undergraduate students, and four to both (see exhibit 2).

Allocation of Time

Those schools responding that they had at least one course in international accounting or international taxation were asked to estimate the percentage of all course assignment time devoted to sixteen specific topics plus any others not listed (see exhibit 3). Ranked in mean order, excluding the international taxation courses, respondents report time allocation as follows: (1) comparative accounting principles; (2) FASB No. 8 and foreign-currency translation; (3) financial reporting and disclosure; (4) inflation accounting; (5) consolidations; (6) international accounting standards; (7) transfer pricing, foreign tax credit, and taxation of foreign-source income; (8) cash management and foreign-exchange risk management; (9) international accounting history and background information; (10) nonaccounting business topics, including introductory background information; (11) performance evaluation; (12) auditing; (13) management accounting; (14) taxation; (15) other topics; (16) social accounting; and (17) financial accounting.

When the four international taxation courses are included, transfer pricing, foreign tax credit, and taxation of foreign-source income moves to fourth, while taxation moves to second.

Less than one-half of those schools expecting to offer a course in the next three years were able to estimate the allocation of time. Therefore, the authors did not feel that it would be useful to rank their responses concerning time allocation.

Analysis of Results

Forty-four schools replied that they do offer one or more courses. This represents an increase of seven schools over the survey conducted by Burns. There are two possible explanations for this. Since the number of schools expecting to add a course within three years decreased by eight from Burns' survey, it is possible that several of these schools now offer a course. This would mean that the number expecting to offer a course has decreased. On the other hand, the differences in results could be explained by the difference in sample selection. The listing of members of the International Section was more current. In addition, by including those schools already having a course in international accounting or international taxation in their curricula or those schools

Exhibit 3. Allocation of Time to International Accounting by Topic[a]

Rank by mean	Topic	Percentages Mean	Standard deviation	Median	Mode	Range
1.	Comparative accounting principles	11.7	8.1	10	10	0-40
2.	FASB No. 8 and foreign-currency translation	10.7	5.8	10	10	0-28
3.	Financial reporting and disclosure	8.3	5.6	8	5	0-20
4.	Inflation accounting	7.8	5.1	7	10	0-25
5.	Consolidations	7.4	10.2	5	0	0-40
6.	International accounting standards	7.3	4.5	7	10	0-20
7.	Transfer pricing, foreign tax credit, and taxation of foreign-source income	6.3	4.0	5	10	0-14
(4)[b]		(8.2)[b]	(13.2)[b]	(5)[b]	(10)[b]	(0-80)[b]
8.	Cash management and foreign-exchange risk management	6.2	5.0	6	10	0-20
9.	International accounting history and background information	5.9	5.1	5	5	0-25
10.	Nonaccounting business topics, including introductory background information	5.0	3.4	5	5	0-10
11.	Performance evaluation	4.7	4.3	5	0	0-15
12.	Auditing	4.3	3.7	4	0	0-11
13.	Management accounting	4.0	6.3	0	0	0-27
14.	Taxation	3.4	4.1	0	0	0-15
(2)[b]		(11.5)[b]	(26.5)[b]	(4)[b]	(0)[b]	(0-100)[b]
15.	Other topics	2.7	5.2	0	0	0-20
16.	Social accounting	2.4	3.0	0	0	0-10
17.	Financial accounting	1.9	3.8	0	0	0-14

[a] Calculations are based on thirty-five completed questionnaires relating to international accounting courses. Four questionnaires related to international taxation. Seven schools did not respond to this question.

[b] Calculations are based on thirty-nine courses after including the four international taxation courses.

offering a degree in international business, instead of AACSB schools with ten or more professorial-rank faculty members, the author may have received slightly different results.

Two definite conclusions can be drawn from the results. The number of courses offered continues to increase, reflecting the growing importance in the curriculum, and a large majority of these courses are offered on a graduate level.

It is interesting to note how the time-allocation results change when the four international taxation courses are included. It is very likely that coverage of transfer pricing, foreign tax credit, taxation of foreign source income, and other taxation issues will continue to grow in the future either by increasing the time devoted to these topics in international accounting courses or by developing new courses in international taxation. A logical explanation for this is the growing importance of these topics to multinationals. They deal directly with these problems in their operations and would likely have a strong preference for course coverage in these areas.

INTERNATIONALIZING THE CURRICULUM

In 1966 the Committee on International Accounting of the AAA (predecessor to the International Accounting Section) recommended the inclusion of a course or seminar on "International Accounting" in the accounting curricula of institutions of higher learning.[12] The 1973 Report of the Committee recommended that ultimately, the entire accounting curriculum should be "internationalized."[13] The concept of internationalizing the accounting curriculum makes much sense. Many domestic accounting problems have international counterparts. Why not include coverage of international accounting problems in their appropriate domestic counterparts? International accounting problems really are not separate and distinct from domestic ones. Why should they be treated as such by developing a separate course in international accounting?

Conceptually, there is a great deal of appeal to this suggestion. However, there are some practical problems to consider. For example, how will material on international accounting and international taxation be integrated into existing courses since few texts, with the exception of advanced accounting, currently cover these topics? Will the added material overburden students and faculty alike in dealing with courses already packed full of accounting information?

Probably the most difficult problem to overcome is the lack of qualified faculty to teach international accounting. There were several revealing responses to the author's survey from schools indicating an

[12] A Recommendation by the Committee on International Accounting, *International Dimensions of Accounting in the Curriculum* (Sarasota, Fla.: American Accounting Association, 1966).

[13] Report of the Committee on International Accounting, *Accounting Review Supplement to Volume 48* (Sarasota, Fla.: American Accounting Association, 1973), p. 166.

intention to add a course in international accounting to their curricula within three years. For example, "We would like to offer one, but have no one to teach it," "We have nobody with a strong interest," or "We are currently in the market for someone with an interest in international accounting." These statements reflect some problems in securing qualified faculty, yet each school clearly expressed an intention to offer a course. The author questions how many other schools would like to offer a course but do not have adequately trained faculty.

International Section of the AAA

In 1978, the Education Committee of the International Section of the AAA recommended that the accounting curricula of institutions of higher learning include:

1. An introduction to international accounting in either the introductory financial or managerial course;
2. An intermediate level international accounting course to be available as an undergraduate business elective; and
3. A specialized graduate-level major in either international accounting or international business.[14]

This is an excellent recommendation by the committee even though it falls short of a full integration of international and domestic accounting topics. However, the same question arises. Are there sufficiently qualified faculty to teach the material? The committee is well aware of this problem and has been taking steps to alleviate it. For example, the committee offers several workshops on accounting curriculum internationalization held at regional AAA meetings. The workshops familiarize interested faculty members with teaching materials, course outlines, and various approaches to teaching international accounting. These workshops are excellent vehicles for increasing the awareness of faculty members to the source material currently available.

There are two other significant undertakings of the International Section which should eventually lead to more qualified faculty. Course outlines in international accounting, collected each year, are available to interested faculty members through the AAA syllabus exchange or through the Education Committee of the International Section. Also, the committee has prepared an annotated topical bibliography of two

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[14] A Recommendation by the Education Committee of the International Accounting Section, *The Internationalization of Accounting Curriculum* (Sarasota, Fla.: American Accounting Association, 1978).

to four good international accounting articles, book chapters, and other material for each undergraduate accounting course. The purpose of the readings list is to help noninternational faculty members to internationalize their courses.

ACCREDITATION

In 1974, the AACSB amended its accreditation standards, thereby compelling collegiate schools of business administration to expose their students to the international as well as domestic dimensions of business in order to maintain their accreditation. The amendment did not specify how business schools should incorporate the international dimension in the curriculum. Accordingly, with the financial support of the General Electric Foundation, the AACSB held a series of workshops in each of the seven AACSB regions, following a general plenary meeting in Washington, D.C., to assist faculty in the functional areas of business (accounting, finance, marketing, and management) in introducing the international component to the business curricula.[15]

The accounting workshops focused on three areas:

1. Familiarizing the participants with the institutions involved in international accounting and some of the key literature available in the field;
2. Reviewing the course outlines currently used by faculty to teach international accounting;
3. Approaches to internationalizing the existing accounting curriculum.[16]

Workshop participants agreed that there was no one "best" method of incorporating the international dimension into accounting curricula. At the MBA level, cases and term papers provided the most desirable approach to exposing graduate students to international accounting. At the undergraduate level, three internationalization options were identified as follows:

1. Incorporating the international dimension into the sophomore level introductory accounting course;
2. Weaving the international content throughout the upper division accounting courses; and

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[15] American Assembly of Collegiate Schools of Business, *The Internationalization of the Business School Curriculum: Program of Plenary and Workshops* (St. Louis: AACSB, 1979), pp. 1-6.
[16] Ibid., pp. 23-45.

3. Requiring a separate international accounting course, preferably at the senior level, for all accounting majors.

The problem associated with the lack of qualified faculty was discussed in connection with each option. The suggestion was made that, to prepare for the future, a separate international accounting course should be a prerequisite at the Ph.D. level in order to expose future faculty members to the international aspects of accounting.

The workshops were so well received that a recommendation urging each functional area to try to repeat such workshops in conjunction with the national annual meetings was unanimously echoed at each AACSB regional workshop. The AACSB was successful in obtaining financial support to repeat the series for two additional years.

The workshops offered by the International Section and the AACSB are invaluable aids in achieving the goal of developing qualified faculty to teach international accounting. The successful integration of international and domestic topics can only occur when a sufficient number of faculty members are adequately trained and motivated to incorporate international accounting into their existing curricula.

President's Commission on Foreign Language and International Studies

In 1978, the president appointed a Commission on Foreign Language and International Studies, the objective of which was to evaluate the state of foreign language and international studies and their impact on the nation's internal and external strength. The idea for such a commission grew from the final proclamation of the Helsinki Accords committing the signatories "to encourage the study of foreign language and civilization as an important means of expanding communication among peoples."[17]

The commission report does not deal specifically with accounting but does relate to the overall educational background of business students. On a general level, the commission recommended that all students of all universities and colleges should study two or three courses in their curriculum having an international content. More specifically, the commission recommended that undergraduate programs in business should focus on developing international components for the core business curriculum in accounting, finance, marketing, and business policy. The Commission recommended the integration of international or comparative perspectives in teaching these courses. The commission

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[17] A report to the president from the President's Commission on Foreign Language and International Studies, *Strength Through Wisdom: A Critique of U.S. Capability* (Washington, D.C.: Government Printing Office, 1979), p. 1.

felt that the AACSB's accreditation requirement that an international component be part of business school programs is too general to enforce. They recommended firmly that at least one course in international business should be required for the bachelor's and master's degrees.[18]

The significance of the recommendations of the commission are twofold. First, they provide a great deal of "ammunition" for insisting that students in business schools, and particularly accounting majors, should have an international dimension to their study program. Secondly, and more important, is the fact that these recommendations came from a group that did not have any specific business school representatives on it. Therefore, the recommendations will have more credibility.

INTEGRATING THE CURRICULUM

Several suggestions have been made for the internationalization of the accounting curriculum. The development of separate courses is an acceptable first step. However, the long-term objective should be to integrate fully international and domestic topics. Progress toward this goal will come about as more and better teaching materials are developed and as more faculty members become aware of, and exposed to, the international dimensions of accounting.

By examining the results of the author's survey and comparing it with the traditional undergraduate and graduate equivalents of courses in accounting, it is clear where topics in international accounting and international taxation would fit into the curriculum (see exhibit 4). This list is not meant to be exhaustive. It does indicate how coverage of some international accounting and international taxation topics could be integrated into the accounting curriculum.

Internationalization of the accounting curriculum is a relatively new concept. Most schools have included coverage of international accounting in their existing curricula by establishing separate courses. As the author's survey indicates, most of these courses have been offered on a graduate level. While a decision may be made to establish a separate course, either on a graduate or undergraduate level, most schools are constrained by the lack of available funds for new course offerings, the lack of flexibility in existing curricula to offer a new course, and the lack of qualified faculty members to teach a separate course. These are important considerations which, in many ways, add to the attractiveness of integrating the curriculum.

[18] Ibid., pp. 129-33.

Exhibit 4. Integrating the Curriculum

Current coverage	Expanded international coverage
Intermediate accounting	
Generally accepted principles and concepts	Conservative approach to the disclosure of financial information (West Germany) Uniformity — Plan of accounts (France)
Use of reserves	Secret reserves, income leveling (Switzerland)
Inflation accounting	Current cost accounting (United Kingdom) Replacement value accounting (Netherlands)
Inventory, depreciation, research and development, tax-effect accounting	Comparison with international standards (IASC)
Advanced accounting	
Branch accounting	Foreign branches and joint ventures
Foreign-exchange accounting	Foreign trade accounting
Foreign-currency financial statement translations (FASB Nos. 1 and 8)	Current rate method (Western Europe)
Consolidations and segment reporting (FASB No. 14)	Accounting for foreign subsidiaries
Managerial accounting	
Inventory planning and control	International working capital management
Capital budgeting	Foreign investment decision making
Decentralized decision making	Decentralized global information systems
Transfer pricing	Multinational transfer pricing and control
Decision models and uncertainty	Foreign-exchange risk analysis and control
Auditing	
Internal controls (SAS Nos. 16 and 17)	Foreign Corrupt Practices Act
Content and types of financial statements Reporting standards and disclosure requirements Auditing standards and opinion reports	Examples of differences by country or region Comparison with International Standards (IFAC)
Income tax accounting	
Role of income tax accounting in determining financial accounting procedures	Requirements for the use of income tax procedures in financial accounting
Individual taxation	Taxes on income earned abroad
Corporate taxation	Tax treaties, withholding of taxes, tax havens, foreign tax credits Domestic international sales corporations

RECOMMENDATIONS

The long-term goal of education in international accounting should be to internationalize the accounting curriculum. After all, courses are primarily designed to teach students about the financial, managerial, audit, and tax problems of corporations. Many corporations in today's society are multinational in nature. No one can deny the impact of the operations of multinationals on the economy of the United States and on foreign countries. Therefore, we should strive to integrate international accounting into existing curricula.

Internationalization of the curriculum does not have to be dependent upon adequate coverage in existing textbooks. Admittedly, there may be some difficulties in fitting the international material into current courses. However, each school can determine how and to what extent it wishes to integrate the material. A member or members of the faculty could develop the appropriate material, which could be issued in the form of a supplementary booklet for each course. The material on international accounting and international taxation would be tied to the coverage of related domestic problems. Special problems and cases could be developed for assignment purposes. This would be a feasible interim step until textbooks could be revised to reflect the integration of materials.

If the curriculum were internationalized in the undergraduate and graduate equivalent courses, the author recommends that a separate course be developed to focus on a comparative analysis of accounting in different environments which would deal with the environmental factors underlying the development of different accounting standards and practices in various countries and regions of the world. Included would be a comparison of specific accounting procedures and financial reporting practices. The material would not be incorporated into the integrated curriculum. This kind of course would provide students with the opportunity to learn about different accounting systems and could be taught on a seminar level with assigned cases, problems, and term papers. The course should be open to both graduate students and senior-level undergraduates.

If a school wishes to have some coverage of international accounting and international taxation but does not find integration of the curriculum a desirable or feasible alternative, the best option would be to offer a multidimensional course, open to both graduate and senior-level undergraduates, which would deal, on a more general level, with the comparison of different accounting systems. The course

should also include coverage of foreign-currency transactions and translations, foreign-exchange risk, inflation accounting, transfer pricing, international taxation, and international financial reporting and disclosure. As the author's survey indicates, those schools currently offering courses in international accounting and international taxation spend more time on these topics than on any others.

CONCLUSIONS

The operations of multinationals are likely to continue to grow in the future. The need for education in the field of international accounting and international taxation will grow with them. A primary focus of courses will likely be in the areas of foreign-currency accounting, transfer pricing, and international taxation. These areas are very important to the operation of multinationals. Prospective employees can receive much of their necessary education in these areas through courses offered at universities.

CPA firms are increasingly becoming more multinational in scope. Ernst and Ernst recently joined with numerous other accounting firms around the world to form a new international organization called Ernst and Whinney International. Other large accounting firms have formed international networks, sometimes called federations or groupings, in order to increase their geographical coverage, broaden their knowledge and contacts, and establish uniform quality standards and controls.[19] It is likely that large CPA firms will look favorably on those prospective employees with some knowledge of international accounting and international taxation.

The academic community is aware of the need for more education in international business in general, and in international accounting specifically. Both the International Section of the AAA and the AACSB have taken specific steps to meet this need by developing workshops to train faculty members in the core areas of business administration. Progress will continue to be made as more faculty members become sensitized to the need for international business education. The results of the author's survey clearly reflect a continuation of the trend toward more course offerings in international accounting and international taxation.

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[19] Ernst & Ernst, Two British Firms to Form Group," *Wall Street Journal,* 17 January 1979, p. 10.

Foreign Operations Disclosures by U.S.-Based Multinational Corporations: Are They Adequate?

VINOD B. BAVISHI and HAROLD E. WYMAN*

INTRODUCTION

The area of financial reporting for international enterprises is in the midst of an information explosion. The Financial Accounting Standards Board (FASB) in the United States, promulgator of generally accepted accounting principles (GAAP) for U.S.-based firms, issued a statement requiring certain disclosures of foreign operations in December 1976, effective for the 1977 reporting year.[1] The United Nations Center on Transnational Corporations (UNCTC) called for financial information from Transnational Corporations in October 1977.[2] The Organization for Economic Cooperation and Development (OECD)

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The authors wish to express their appreciation to Pushap Goyal, Jill Rozdilski, and Darlene Takach for their research assistance.

[1] Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 14 (SFAS No. 14), "Financial Reporting for Segments of a Business Enterprise" (Stamford, Conn.: FASB, 1976).

[2] United Nations Commission on Transnational Corporations, "International Standards of Accounting and Reporting" (New York: UNCTC, New York, 1977).

revised guidelines for multinational enterprises in 1979,[3] and the International Accounting Standards Committee (IASC) issued a proposed statement on the subject as recently as March 1980.[4]

Because the FASB requirement has been established longer and calls for mandatory disclosures by some of the world's largest corporations, the authors thought that a review of reporting of foreign operations by U.S. corporations would provide useful information for those interested in financial reporting of international operations. This paper explains what is required by the Financial Accounting Standards Board, describes the nature of the data examined, analyzes the data for adequacy, suggests improvements based on the analysis, and contrasts the FASB requirements with information desired by the UNCTC, OECD, and IASC.

FOREIGN OPERATIONS DISCLOSURES REQUIRED OF U.S. FIRMS

Certain financial reporting disclosures concerning foreign operations and export sales are required by Statement of Financial Accounting Standards (SFAS) No. 14. Foreign operations for U.S. firms in the context of the statement include revenue-producing operations located outside the United States that are generating revenue either from sales to unaffiliated customers or from intraenterprise sales, or transfers between geographic areas.

The overall nature of SFAS No. 14 can be observed from its title, "Financial Reporting for Segments of a Business Enterprise." The statement is written so that the primary focus is on segment reporting; it has also been called line of business reporting. The foreign operational reporting is treated as a subset of segment reporting in the statement, with references to segment reporting definitions. For example, in discussing the revenue from foreign operations to be reported, the statement says "Revenue as defined in paragraph 10(c)." Paragraph 10(c) defines the revenue of an industry segment.

Since we are trying to determine the adequacy of the foreign operations disclosures required by SFAS No. 14, it will be useful to repeat the intent of the statement as expressed by the FASB,

> The purpose of the information required to be reported by this Statement is to assist financial statement users in analyzing and understanding the enter-

[3] Organization for Economic Co-operation and Development, "International Investment and Multinational Enterprises" (Paris: OECD, 1979).

[4] International Accounting Standards Committee, Exposure Draft 15, "Reporting Financial Information by Segment" (London: IASC, 1980).

prise's financial statements by permitting better assessment of the enterprise's past performance and future prospects.[5]

Regulation S-K of the United States Securities and Exchange Commission (SEC) was issued at the end of 1977 to conform the SEC line of business reporting rules to the definitions and reporting guidelines of SFAS No. 14, and to consolidate disclosure rules. Regulation S-K stated that provisions relating to financial information about foreign and domestic operations and export sales must be made for fiscal years beginning after December 15, 1976, or for the registrant's last five years, if that is a shorter period. Thus, the earliest data required for calendar year companies was for 1977, making these disclosures a fairly recent requirement.

SFAS No. 14 material on segment reporting not relevant to foreign operations disclosures will not be covered in this paper. Under Statement No. 14, the following information for foreign and domestic operations should be disclosed:

1. Revenue: with sales to unaffiliated customers and sales or transfers between geographic areas shown separately;
2. Operating profit or loss: revenue less operating expenses which exclude general corporate expense, interest expense, domestic and foreign income taxes, and so forth; and
3. Identifiable assets.

Reporting revenue, operating profit or loss, and identifiable assets for foreign operations are required only if they are significant. There are two tests of significance, either of which would require disclosure:

1. Revenue generated by the enterprises from sales to unaffiliated customers is 10 percent or more of consolidated revenue as reported in the enterprises' income statement; and
2. Identifiable assets of the enterprises' foreign operations are 10 percent or more of consolidated total assets as reported in the enterprises' balance sheet.

Under certain circumstances, the information concerning revenue, operating profit or loss, and identifiable assets related to foreign operations must be reported by geographic area. Latitude to determine appropriate geographic areas is left with the enterprise because, according to paragraph 34 of the statement, "No single method of grouping the countries in which an enterprise operates into the geographic areas

[5] SFAS No. 14, paragraph 5.

can reflect all of the differences among international business environments." Foreign geographic areas are individual countries or groups of countries.

In an effort to assist enterprises in identifying foreign geographic areas, paragraph 34 of Statement No. 14 provides a list of factors to consider: proximity, economic affinity, similarities in business environments, and nature, scale, and degree of interrelationship of the enterprises' operations in the various countries.

The information by geographic area is required where there are two or more significant geographic areas. Significance was defined as a geographic area in which revenue from sales to unaffiliated customers or identifiable assets was 10 percent or more of related consolidated amounts.

Information on export sales by domestic operations is also required by SFAS No. 14. Export sales are sales to customers in foreign countries made by domestic operations. If the amount of export sales to unaffiliated customers in foreign countries is 10 percent or more of total revenue from sales to unaffiliated customers, the amount must be reported separately in the aggregate and by such geographic areas as are considered appropriate in the circumstances. Export sales disclosures are required even if the enterprise is not required to report information about its operations in different industries or geographic areas.

As part of the disclosure requirement for revenue form foreign operations, the enterprise must report information on transfer pricing. SFAS No. 14 requires that intraenterprise sales or transfers between geographic areas be accounted for on the basis used by the enterprise to price the transaction, and the basis of accounting for intraenterprise sales or transfers shall be disclosed.

STUDY DESIGN

Since U.S.-based multinationals would have significant foreign operations to disclose under SFAS No. 14, they were a natural candidate for the current study. However, those with experience in this area know that there is no commen agreement on the exact definition of "multinational." The authors defined the multinational population for this survey as:

1. Firms from the *Fortune* listing of "500 Largest United States Industrial Corporations for 1978," and

2. Firms with overseas or foreign assets accounting for 10 percent or more of total assets, or
3. Firms with overseas or foreign sales amounting to 10 percent or more of total sales, and
4. Firms operating in four or more countries.

Items 2 and 3 above are obviously parallel to the reporting requirements of SFAS No. 14.

A review of 1978 annual reports and SEC Form 10-Ks for 480 out of the *Fortune* 500 companies identified 296 firms that met the criteria. Exhibit 1 indicates a breakdown of the 296 U.S.-based multinationals classified by industry according to the Standard Industrial Classification (SIC) Code established by the United States Office of Manage-

Exhibit 1. Number of MNCs in the Sample by Industry

S.I.C. code	*Industry titles*	*No. of MNCs in sample*
10	Mining, crude oil	6
20	Food	25
21	Tobacco	4
22	Textiles, vinyl flooring	3
23	Apparel	5
25	Furniture	2
26	Paper, fiber and wood products	13
27	Publishing, printing	3
28	Chemicals	31
29	Petroleum and refining	19
30	Rubber, plastic products	6
32	Glass, concrete, abrasives, gypsum	9
33	Metal manufacturing	10
34	Metal products	15
36	Electronics, appliances	26
37	Shipbuilding, railroad and transportation equipment	4
38	Measurement, scientific, photographic equipment	15
40	Motor vehicles	18
41	Aerospace	6
42	Pharmaceuticals	17
43	Soaps, cosmetics	7
44	Office equipment (includes computers)	11
45	Industrial and farm equipment	31
47	Musical instruments, toys, sporting goods	4
48	Broadcasting, motion picture production and distribution	3
49	Beverages	3
	TOTAL	296

ment and Budget. The data base of the study was provided by the 1978 annual report and Form 10-K of the company concerned. The company disclosures on foreign operations from these reports were analyzed against requirements of SFAS No. 14.

MAJOR FINDINGS

Current practices of U.S.-based multinationals for reporting on overseas operations are analyzed in this section.

Geographic Area Disclosure

In reviewing disclosures of foreign operations by geographic areas, the authors looked for application of the factors for identifying geographical areas presented in paragraph 34 of SFAS No. 14. Exhibit 2 presents a frequency distribution for the number of geographical areas reported for the total sample, and for five selected industries. Exhibit 2 demonstrates the existence of a tendency to use a few broad areas, with 73 percent of the sample using two or three geographical categories. The flavor of this broad approach can be illustrated by looking in detail at one industry, pharmaceuticals.

Exhibit 2. Disclosures by U.S.-Based MNCs/Foreign Operations by Geographic Areas

		Selected industries				
Number of geographic areas reported	*Total sample % N = 296*	*Food % N = 25*	*Chem. % N = 31*	*Oil % N = 19*	*Pharm. % N = 17*	*Office products % N = 11*
Two	29	32	19	21	—	—
Three	44	28	49	37	47	91
Four	16	24	23	26	35	9
Five	9	12	6	5	18	—
Six	1	4	3	—	—	—
None	1	—	—	—	—	—

Imagine that an investment analyst is comparing the risk of foreign operations of various U.S. multinational firms in the pharmaceutical industry. The geographical classifications used for foreign operations of seventeen U.S. pharmaceutical companies are presented in exhibit 3. Notice that there are twelve different classifications for the seventeen companies.

Exhibit 3. Geographic Classifications Used by U.S.-Based MNCs in Pharmaceutical Industry

Classifications	*No. of companies using classification*
Three classifications	
United States/Europe/and other	4
United States/Americas and Far East/Europe and Mideast and Africa	1
United States/OECD/other	1
United States/Europe and Mideast/other	1
United States/Canada and Latin America/Europe and Africa and Far East	1
Four classifications	
United States/Europe/Western Hemisphere (except United States) /Africa and Asia and Pacific	1
United States/Europe and Africa/Canada and Latin America/other	1
United States/Latin America/Europe and Mideast and Africa/Pacific and Far East and Canada	2
United States/Pacific/Western Hemisphere (except United States) /Europe and Mideast and Africa	1
United States/Western Hemisphere (except the United States) /Europe and Africa/other	1
Five classifications	
United States/Canada/Latin America/Asia and Pacific/ Europe and Mideast and Africa	1
United States/Europe/Asia/Africa and Mideast/ Canada and Latin America	1
United States/North America (except the United States) /South America/England and Continental Europe/Africa and Asia and Pacific	1
TOTAL	17

The difficulty of assessing foreign risk of one company or comparing foreign risk between companies is apparent from the variety and vagueness of titles. Where is the "proximity, economic affinity, similarities in business environment" apparent in a classification such as "Europe/MidEast/Africa" used by one company?

In fairness to the conscientious financial executives who prepare the statements reviewed, it should be noted that the problem may reside in a feeling that any area which does not contribute 10 percent is not significant enough to show separately. However, regardless of whether the fault lies with the statement or with its interpretation, the user does not receive adequate information.

Foreign Sales and Transfer Pricing Method Used

When a firm has intraenterprise sales or transfers between geographic areas, the basis of accounting for these must be disclosed. Of the current sample, 66 percent of the firms had these transactions. Results of the study of transfer pricing disclosures are reported in exhibit 4. Overall, "market" was the most popular basis for transfer pricing, 35 percent, followed by "cost plus" at 15 percent. Thirty percent made no disclosures, indicating no significant transfers. The information for selected industries shows the heavy reliance on market price by the oil industry, 68 percent, plus some negotiated transfer prices, 11 percent. The area of office products relies heavily on "cost plus," 55 percent, while only 18 percent was "market." The significantly different patterns reported by the selected industries are interpreted to indicate that firms are making a serious attempt to comply with the transfer pricing provision of SFAS No. 14.

Exhibit 4. Disclosures by U.S.-Based MNCs/Transfer Pricing Policy Used

		Selected industries				
Transfer pricing policy	*Total sample % N = 296*	*Food % N = 25*	*Chem. % N = 31*	*Oil % N = 19*	*Pharm. % N = 17*	*Office products % N = 11*
Market	35	28	39	68	18	18
Negotiated	5	—	—	11	—	9
Cost plus	15	20	13	—	29	55
Other	1	—	3	—	—	—
Intersegment transfer not significant	14	24	13	11	12	—
No disclosure	30	28	32	11	41	18

SEC Regulation S-K calls for a type of disclosure different from that of SFAS No. 14.

If intra-enterprise sales/transfers or purchases were made at prices substantially higher or lower than prevailing market prices or at prices substantially higher or lower than those charged to or received from unaffiliated parties for similar products or services, then the effect of this pricing practice on the reported revenue and/or profitability or loss of a geographic area should be disclosed. If practical, the disclosure should indicate the estimated or approximate amounts of revenue and profitability of the intra-enterprise sales/transfers of purchases had been made at the prevailing market price or at the price charged to or received from the unaffiliated parties.

The authors did not find any of these which means either that they do not exist or are not being reported.

Profitability Disclosure

Profit from foreign operations under SFAS No. 14 can be operating profit or loss as defined by the segment reporting provision or net income, or some other measure of profitability between operating profit or loss and net income. The authors found that 72 percent of the firms surveyed reported operating profit as demonstrated in exhibit 5. Among the selected industries, oil showed the greatest variety in reporting profits. This would seem to make an analysis of the foreign operations of the oil industry difficult.

Exhibit 5. Disclosures by U.S.-Based MNCs/Income from Foreign Operations

			Selected industries			
Basis of income reporting	*Total sample* % $N = 296$	*Food* % $N = 25$	*Chem.* % $N = 31$	*Oil* % $N = 19$	*Pharm.* % $N = 17$	*Office products* % $N = 11$
Operating profit	72	76	84	26	88	82
Income before income taxes	5	4	—	16	—	—
Net income	12	8	10	47	—	9
Operating profit and other level	9	4	6	11	12	9
No disclosure	3	8	—	—	—	—

Assets of Foreign Operations

With respect to identifiable assets, 90 percent of the firms in the sample reported identifiable assets by geographic area as required by SFAS No. 14. An additional 7 percent of the firms reported both identifiable assets and net assets.

There was no noticeable industry pattern in reporting foreign assets. One could say that, except for the problem of defining geographic segments previously discussed in this paper, the foreign operation disclosures in this area are adequate.

Exports from the United States

SFAS No. 14 requires that if export sales from domestic operations amount to 10 percent or more of total revenue from unaffiliated customers, the amount should be reported separately in the aggregate and

Exhibit 6. Disclosures by U.S.-Based MNCs/Exports from the United States

		Selected industries				
Basis of export reporting	*Total sample* % $N = 296$	*Food* % $N = 25$	*Chem.* % $N = 31$	*Oil* % $N = 19$	*Pharm.* % $N = 17$	*Office products* % $N = 11$
Total exports only	19	12	16	5	6	18
Exports by geographic area	5	—	13	—	—	—
Statement: exports from United States not significant	12	28	10	—	12	—
No disclosure	65	60	61	95	82	82

by appropriate geographic areas. Results of the study of export sales disclosures appear in exhibit 6. It is interesting to note that in the sample of U.S. multinationals, only 24 percent had significant export sales. One concludes from this that it is the foreign operations of the multinationals that are significant. This re-emphasizes the importance of foreign operations disclosures.

The low percentage of firms with significant export sales is also observed in most of the selected industries. The chemical industry had the highest percentage of firms with significant export sales, 29 percent, and the most firms showing exports by geographical area, 13 percent.

Voluntary Disclosures

As part of this study, the authors examined other disclosures concerning foreign operations voluntarily made by U.S. multinationals. The results appear in exhibit 7. In the aggregate, a few firms reported voluntary information relating to foreign operations with respect to capital expenditures, liabilities, number of employees, and depreciation and amortization expense. Among the selected industry groups, chemical firms supplied the most voluntary information, and pharmaceuticals the least.

Reporting capital expenditures and depreciation and amortization expense by industry segment was required by SFAS No. 14, so the firms are voluntarily extending this reporting to their foreign operations. As we will explain later, other international organizations, such as the UNCTC and OECD, have advocated these types of disclosures. With the pressure from these organizations and the precedent set by

Exhibit 7. Disclosures by U.S.-Based MNCs/Other Voluntary Disclosures

			Selected industries			
Other voluntary disclosures	*Total sample* % *N* = 296	*Food* % *N* = 25	*Chem.* % *N* = 31	*Oil* % *N* = 19	*Pharm.* % *N* = 17	*Office products* % *N* = 11
Capital expenditures	14	12	32	32	—	9
Liabilities	6	—	23	—	—	9
Employees overseas	5	8	6	5	—	18
Depreciation and amortization expense	6	8	19	5	—	—

the firms reported in exhibit 7, there may be a push to expand this area of reporting.

IMPROVING FASB SFAS NO. 14 DISCLOSURES RELATED TO FOREIGN OPERATIONS

This paper has examined the disclosure of foreign operations with respect to SFAS No. 14 and has commented on the compliance with the requirements concerning adequacy, given what is believed to have been the intent of the statement. Following the same purpose stated by the FASB, to assist the user in analyzing and assessing past and future performance, the authors suggest the following improvements.

1. It is imperative that a specific method of defining geographic areas be instituted by the FASB since present disclosures are almost useless. Several approaches are available for dividing the world into suitable groups:
   a. Groupings according to industrialized countries, advanced developing countries, and developing countries as defined by UN agencies.
   b. Groupings of countries by political risk based on various indices available (Business International, Business Environment Risk Index, and so forth).
   c. Using a 5 percent instead of 10 percent cut-off and having companies report their foreign operations by the following geographic areas: the United States, Canada, Western Europe, Japan, South and Central America, the Pacific (except Japan), Africa, Asia, and other.

2. The authors feel that the transfer pricing disclosures are too general. How is cost determined, by absorption or direct costing? The disclosures studied seldom indicated anything useful for analysis. More de-

tailed disclosure is needed to be useful. If this is not feasible, then the present requirement should be dropped.

3. Integrate segment and geographic disclosures as follows:

Sales	By segments Product A	Product B	Product C	Eliminations	Net sales by geographic area
By geographic areas 1 2 3					
Eliminations					
Net sales by segment					

This is a more useful method to analyze revenues, and it combines the segment reporting and foreign operations disclosure into one matrix that has both segmental and geographic characteristics. A similar format should be used for foreign profitability and foreign asset disclosures.

4. Foreign operations as defined in the statement exclude unconsolidated subsidiaries. As local majority ownership becomes more prevalent in developing countries, a source of profits as well as equity investment subject to foreign risk may be overlooked. It is suggested that the FASB make a provision to report the parent company's share of profit and equity of unconsolidated subsidiaries.

5. Since local borrowing is a method to reduce risk, net assets of foreign operations provide a better measure of assets exposed to risks than identifiable or total assets. Net assets should therefore be reported in addition to identifiable assets.

DIFFERENCES BETWEEN THE U.S. REQUIREMENTS AND PROPOSED DISCLOSURES BY TRANSNATIONAL GROUPS

Some important differences between the U.S. required disclosures and the requirement of OECD, IASC, and UNCTC follow.

1. SFAS No. 14 has defined significant foreign operations in terms of a specific, 10 percent of worldwide revenues and assets. None of the other organizations have done this.

2. SFAS No. 14 calls for disclosing revenues generated by foreign op-

erations either in the aggregate or by geographical area if appropriate. There is a possibility for confusion on this because under SFAS No. 14, the FASB implicitly treats foreign operations and foreign geographical area as segments. This is unfortunate because a segment sells in the market to which it belongs, but a foreign operation may not sell exclusively within the geographic area in which it is located. Should revenues from foreign operations be reported according to the geographic area in which the foreign operation is located or according to the geographical area where the revenue is realized?

The discussion memorandum that preceded SFAS No. 14 quoted Leonard Lorenson's Accounting Research Study No. 12, "Reporting Foreign Operations of U.S. Companies in U.S. Dollars" to the effect that "Sales to U.S. and foreign customers should be disclosed in total and by country or groups of countries if different growth potentials for sales or risks of loss of market are experienced among countries" (page 19). It is unfortunate that SFAS No. 14 did not have this clarity. The OECD, IASC, and UNCTC call for sales and operating results by geographical area.

3. SFAS No. 14 requires that "The basis of accounting for intra-enterprise sales or transfers shall be disclosed." The OECD calls for "The policies followed in respect of intra-group pricing." The IASC exposure draft calls for "The basis on which inter-segment revenue has been determined." The United Nations wants a description of the basis of accounting for "transactions with other members of the group; transactions with associated companies." The authors believe that there is an important difference between disclosing the "basis" of an accounting policy and disclosing the "policies followed," although in practice it appears that U.S. firms disclose the policy rather than the basis for the policy.

4. SFAS No. 14 requires information on export sales by the domestic operation. None of the other groups require this, probably because they are taking an international view of revenues.

5. SFAS No. 14 requires the amount of each reportable industry segment's capital expenditures but does not require this for foreign operations. The OECD would like to see "significant new capital investment by geographical area" and the UNCTC would like "new investment in property, plant, and equipment by foreign geographical area or country."

6. SFAS No. 14 does not require disclosure of employees by geographical area, but the OECD wants "The average number of employees in

Exhibit 8. Comparison of Required or Suggested Disclosure of Foreign Operations

Items	*FASB*[1]	*IASC*[2]	*OECD*[3]	*UNCTC*[4]
1. Applicability specified: (10% or more sales or assets overseas)	Y*	N*	N	N
2. Revenues:				
a. Reported by the geographic areas where the foreign operation is located	Y			
or				
b. Reported according to the geographic area where the revenue is realized		Y	Y	Y
3. Transfer Pricing used:				
a. Basis of an accounting policy	Y	Y		Y
or				
b. Policies followed			Y	
4. Export sales from the parent company from the home country	Y	N	N	N
5. Capital Expenditures by geographic area	N	N	Y	Y
6. Employees by geographic area	N	N	Y	Y

* Y = Yes, N = No
[1] FASB, SFAS 14.
[2] IASC, Exposure Draft 15 (proposed).
[3] Ibid., 1979 revision.
[4] Expert Group Report Op. Cit.

each geographical area," and the UNCTC wants the number of employees at year end according to geographical area. These differences are summarized in exhibit 8.

CONCLUSION

In an earlier section of this paper, it was noted that SFAS No. 14 in its present state could be improved. After reviewing the work of other organizations, the authors would like to offer the following additional suggestions to improve financial reporting for multinational enterprises:

1. All groups — FASB, IASC, OECD, and UNCTC — should work toward developing a common definition of geographic areas.

2. All groups should consider requiring more specific disclosure of transfer pricing policy.
3. All groups should consider requiring inclusion of the parent company's share of unconsolidated foreign subsidiaries in foreign operations disclosures.
4. All groups should consider requiring disclosure of net assets in addition to identifiable assets of foreign operations.
5. All groups should consider requiring integration of segment and geographic area disclosures.
6. The IASC, OECD, and UNCTC should specifically designate what is significant as the FASB has done.
7. The IASC, OECD, and UNCTC should require information on exports by the parent company.
8. Both the FASB and IASC should require information on capital expenditures for foreign operations.
9. Both the FASB and IASC should require disclosure of the number of employees in foreign operations.

It is believed that the information requested will not be costly to provide and will be useful in judging the importance of foreign operations.

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Computerized Accounting: International Issues

HARTMUT J. WILL*

INTRODUCTION

Accounting has traditionally been a human information-processing effort. All procedures have been executed by humans, and all records were visible on clay chips, papyrus, or paper. Computer technology has now changed the structure of most accounting systems. Silicon chips are used to store data now. They also contain many accounting procedures and can execute them at high speed. Modern accounting systems no longer bear resemblance to the journals, accounts, ledgers, and reports of the manual accounting era. The "books" have become electronic files of diverse designs. The procedures have become programs of great variety, written in numerous languages. The reports can be computed electronically at almost any time in any format, according to different accounting policies and printed or displayed on CRT, microfilm, paper, and other media. More and more accounting is performed untouched by human hands and invisible to the human eye. Many accounting transactions are automatically generated by machine programs designed and programmed by nonaccountants in languages seldom understood by accountants.

What has happened? While for centuries accounting was the only formal information system in organizations, it now has become (or is becoming) a mere subsystem in a much larger and more comprehensive

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The author wishes to acknowledge the helpful comments and valuable suggestions received from Professor David Linowes, Dr. Günter Minz, and Mrs. Zella Ruthberg.

management information system (MIS). This may be deplorable, but it nevertheless is a fact of life for many accountants around the world. They are frequently surprised to discover that instead of being in control of the traditional information supersystem, they are suddenly relegated to an information subsystem. Unfortunately, their concerns are often even perceived as "local" from a modern corporate viewpoint in spite of the fact that accounting has always been a "global" discipline in its efforts to measure organizational performance.

Since it seems impossible to recover the "lost ground," accountants must at least attempt to influence their immediate environment, that is, the surrounding MIS, in order to design, maintain, and operate generally acceptable modern accounting systems (MAS). They have much to contribute, but, unfortunately, they seldom speak the technological jargon of the computer specialists and cannot easily force those specialists to learn the "accounting jargon." Too much of the traditional accounting terminology is based on explanations of manual bookkeeping and is therefore obsolete in the 1980s when most accounting systems will be computer based, largely paperless, and frequently integrated into comprehensive MIS. In short, it has become essential for accountants to rethink accounting in systems perspective, to reformulate generally accepted accounting principles (GAAP), and to adjust generally accepted auditing standards (GAAS) accordingly, even if they use their own specialized accounting computer system.

This paper illustrates a conceptual framework for MIS.[1] It can be used by accountants not only to redefine accounting and auditing in a manner that is consistent with both traditional accounting concepts and modern technological developments, but to help define the much needed generally accepted information principles (GAIP). The need for legal or quasi-legal codification of GAAP and GAIP is being recognized in several countries, and the international accounting community is finally becoming aware of a number of other open issues caused by computer technology and confronting the profession. Examples of approaches to the major problems will be drawn from Canada, Germany, and the United States. The conclusions summarize the findings and indicate that a more comprehensive comparison of international developments should be undertaken to tackle the problems and to harass

[1] H. J. Will, "MIS: Mirage or Mirror Image?" *Journal of Systems Management* (September 1973): 24-31; idem., "Auditing in Systems Perspective," *Accounting Review* (October 1974): 690-704; idem. and H. C. L. MacDonald, "Management Information Systems: Analysis and Design Beyond Computers," unpublished book manuscript.

information technology for the benefits of people, organizations, societies, and mankind.

MIS FRAMEWORK

Every successful organization requires an information system in the same way every living system of a higher order depends on a nervous system for its growth and survival. The analogy between an MIS and a nervous system is not as farfetched as it may seem at first sight.

As an open system, every organization is dependent on and affects its environment. It therefore must be able to sense the environmental stimuli (inputs) and responses (outputs) and to behave in such a manner that its "niche" is exploited best for its own growth and survival. Behavioral adjustments may be required and will frequently result in organizational restructuring according to the perceived need for such adaptation, but only intelligent redesign will facilitate subsequent adaptations.

Most of these organizational intelligence functions are performed by humans as information processors. They collect data and model the system. They prepare for environmental threats, discover opportunities, make internal changes, or gain new insights into the problems facing the organization. Prominent among the organizational intelligentsia for centuries have been accountants, but since many of their traditional tasks can be easily formalized and executed on computers faster and more reliably, it is important to consider the accounting tasks in MIS perspective. This means that we will look at accounting from three viewpoints: processors, data, and models to set the stage for the remainder of the paper.

Processors

Humans rely on their senses to collect data. They use their brains to process the various stimuli according to their "world view," and if they are really intelligent they learn, that is, they update the models of their world whenever the senses signal according to new patterns. Such information processing can result in immediate aggressive or evasive action, or it may lead to a decision to collect more information for more "intelligent" action at a later point in time.

Bookkeepers and "manual accountants" have collected and processed economic transaction data according to the well-known accounting models and GAAP to produce balance sheets, income statements, and other reports. Given a set of rules for processing the data, com-

puters (as symbol processors) can perform the same data-processing tasks frequently more efficiently than humans, especially if multiple iterations of these processes are required, for example, evaluation of accounting policies or execution of budgeting applications. It therefore has become necessary to distinguish between those accounting functions that are best performed by machines and those that require human creativity, ingenuity, and intelligence.

Many transaction data are generated electronically in the pursuit of such nonaccounting activities as sales (to compute sales orders, check inventory availability, check credit limits, prepare customer invoices, collect and deliver goods, update the inventory records, and collect cash) and purchasing (to compile purchase orders, stock the goods, update the inventory records, process the vendor invoices, and pay cash). Manual accounting, therefore, would be a duplication of much of this data-processing effort. Hence, accounting as recording becomes a computer by-product. On the other hand, if the accounting functions are first computerized, then it is frequently advantageous to perform many of the information-processing tasks associated with the sales and purchasing cycles likewise by machine. In short, accounting can hardly be isolated from other information processing. Accountants must therefore learn to think "laterally" in order to perceive their increasingly complex environment correctly.[2]

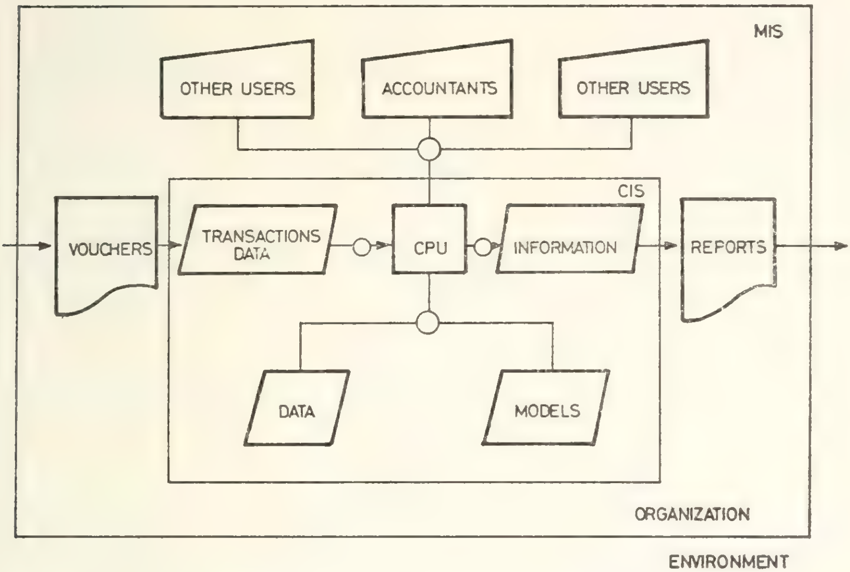
It would be simplistic to conclude from the previous discussion that accountants are being replaced by the central processing units of computer systems. What is intended here is to show that and how accountants can make use of computer technology to provide better and more information for managerial purposes by utilizing computer technology both for routine tasks and for analyses and investigations. Accountants are users of computerized information systems (CIS) as illustrated in exhibit 1 where boxes represent systems; lines, communication links; and nodes, interfaces between systems or subsystems. An interface is defined as a channel and a language by means of which two systems can communicate.

Data

Data are symbolic representations of important states of a system or its elements, and of important events that describe its behavior. The same fact, such as the transfer of goods or the performance of services,

[2] Edward De Bono, *The Use of Lateral Thinking* (Penquin Books, 1971); idem., *Practical Thinking* (Penguin Books, 1976); and *PO: Beyond Yes and No* (Penguin Books, 1973).

Exhibit 1. Accountants as Users of MIS



can obviously be described and interpreted in numerous ways. To claim a monopoly for a particular way of data representation and processing is therefore untenable if one recognizes the multitude of modelling options for organizational states and events. The choice of data description and data collection methods is clearly a matter of choice and must be handled according to the use of the data in each organization.

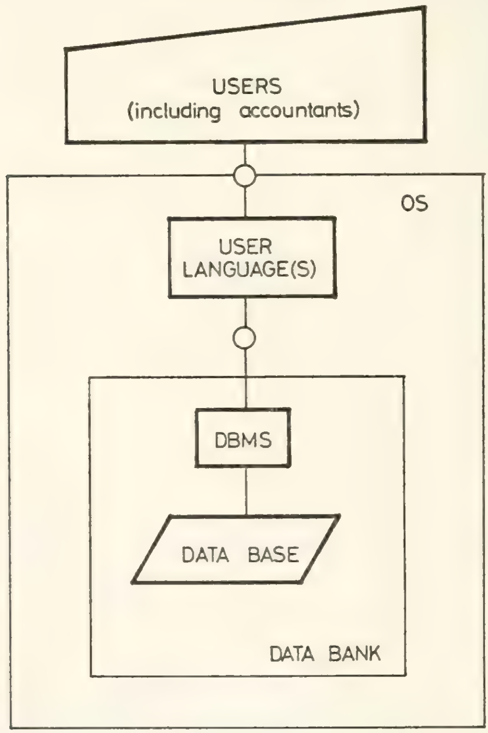
Numerous opportunities exist today to structure data into a data bank as the organization's storage space for informational raw material. Since structure determines behavior, such data structuring influences the data processing behavior with respect to a data bank. Traditional accounting data structures may be ideal for manual accounting data processing, but they can limit the use of the same data for other purposes. In other words, accounting data have become a part of every organization's data bank, and the choice of data structures is no longer primarily or solely dependent on accounting tasks.

It is important to recognize at this point that no generally accepted data bank design principles exist anywhere. On the other hand, if GAAP are defined both as *recording* and as *reporting* principles, then

they should impact the design of each data bank and its maintenance in an organization. Likewise, if auditors need access to data in their investigations, then the data-bank design will impact GAAS. It is therefore surprising that most of the data-base management systems (DBMS) required to structure and to maintain a data base are designed by nonaccountants and nonauditors. In fact, accountants and auditors seem hardly aware of the international standardization efforts with respect to DBMS.[3]

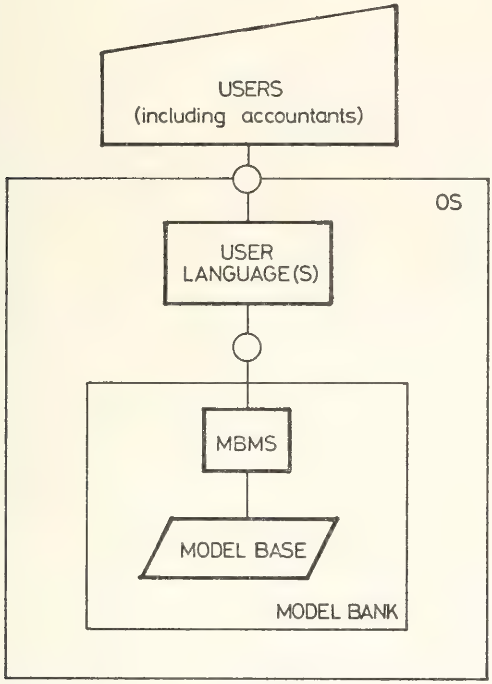
Exhibit 2 illustrates these concepts as information systems components within the operating system (OS) of a computer. The accounting data are part of the data base which should be accessible only via the DBMS in a secure data-bank system. They must meet certain GAAP requirements to be legal in various jurisdictions, but surprisingly few accountants are really aware of their new environment, the DBMS.

Exhibit 2. Data Bank



[3] H. J. Will, et al., "Audit and Control of Data Base and Data Base Management Systems," in Zella G. Ruthberg (ed.), *Proceedings of the Second NBS Invitational Workshop on Audit and Evaluation of Computer Security* (Washington, D.C.: NBS, 1980).

Exhibit 3. Model Bank



Models

A model is any system that is structurally or behaviorally similar to another object or system. It is one problem to establish similarities between an organization and its accounting system(s) and another to realize that the same accounting information can be provided by models of diverse structure and design. Numerous explanations of the accounting model exist in the literature since Luca Pacioli[4] and even more computer programs have been designed to record accounting data and to generate financial statements.

Thus, one can find an almost infinite variety of accounting models in organizations around the world and even inside single organizations. For example, engineers calculate interest, cash flow, and depreciation in similar ways as accountants do, but their respective models may have been designed in isolation and without knowledge of each other's efforts. In fact, every accounting number is the result of a modelling

[4] R. Mattessich, *Accounting and Analytical Methods* (Homewood, Ill.: Richard D. Irwin, 1964); Yuji Ijiri, *The Foundations of Accounting Measurement* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967); and Erich Kosiol, *The Pagatoric Theory of Financial Income Determination* (Urbana: University of Illinois, 1978).

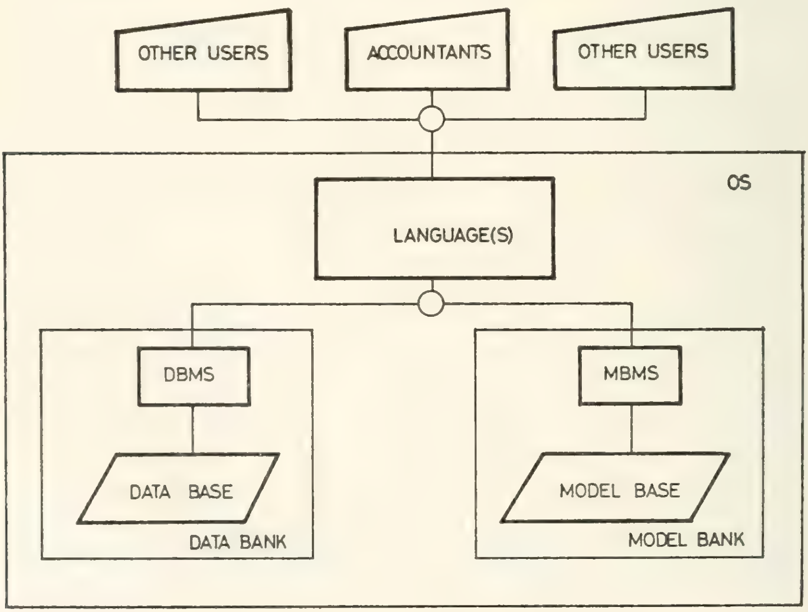
effort, and its use is either a data-retrieval problem or a model application, depending on one's viewpoint.

A model bank which is analogous to the data bank is defined as illustrated in exhibit 3. The model base consists of modules as the smallest modelling units that can be used as building blocks for larger models. They can be managed similarly to the data base by what may some day be called model-base management systems (MBMS) to which users have access via languages.

In this way, the same modules may be used by accountants to prepare actual financial statements and budgetary forecasts, even though some of the modules may have been originally designed at the request of engineers by a computer science student during summer employment. Again, there are many ways of structuring these modules, and it is important to realize that their design depends partly on data and their structures or on assumptions about these data structures.

Depending on whether accountants view their tasks primarily as data processing or as modelling, they are concerned with facts on the one hand and with skills and procedures on the other. The data bank and the model bank are therefore complementary constructs. This is depicted in exhibit 4 in the context of an operating system which

Exhibit 4. Accountants and MIS



governs their access to languages, DBMS, and data as well as MBMS and models. Also shown are other users whose information-processing requirements may compete or even conflict with those of accountants.

To summarize, the freedom of designing MIS is currently limited only by the ingenuity of people. In fact, accountants and auditors can be confronted with an almost infinite variety of MIS for which no generally accepted standards exist for design, maintenance, and operations. Although a few computer languages are standardized, no generally accepted standards are available for OS or DBMS. MBMS are hardly thought of except in the context of program librarian systems for which no standards exist either.

To behave intelligently requires correct perceptions of one's environment. Accountants must become aware and involved before it is "too late." This information systems framework will now serve as the basis for a discussion of accounting principles and auditing standards in national and international perspective.

ACCOUNTING PRINCIPLES

Generally accepted accounting principles govern the ways in which accounting systems (AS) may be designed, maintained, and used for legally required recording and for periodic reporting. They exist in all countries and are referred to in most legal codifications of company, corporation, and tax laws; however, GAAP are nowhere defined in precise terms and do not always cover the recording functions. For example, in Canada and the United States, GAAP are primarily considered as reporting principles, whereas in Germany they cover both aspects of AS.

Although many good reasons exist for the flexibility of GAAP, the previous discussion of MIS raised a number of issues that are now of interest.

1. MIS designs are inseparable from organization designs: they are dual aspects of the same phenomenon. Too many accountants view this fundamental duality as separate issues.
2. MIS designs govern organizational behavior because structure determines behavior. Too few AS and MIS designers recognize this fact.
3. No generally accepted information principles (GAIP) exist nationally or internationally at this time. Too few people recognize the dangers of absolute freedom to design computer-based MIS.
4. Modern accounting systems (MAS) are subsystems within MIS which are frequently designed by nonaccountants. Too few accountants seem to realize this.
5. MIS designers have neglected accounting, control, privacy, security,

and auditability considerations in many instances. Too few accountants offer or provide help in spite of their apparent expertise.

6. To introduce revisions that are motivated by GAAP, or by control, security, and auditability considerations into existing MIS requires frequently extensive and costly redesigns. Too few people seem to realize this.

7. The rapid evolution of computer technology and the possibilities for designing new, faster, and more comprehensive MIS or MAS requires accountants to rethink GAAP in the computer age. Most accountants expect to be interpreted instead of expecting to offer guidance.

8. Although formalization of GAAP will lead to the automation of many accounting functions, lack of such formalization will not prohibit such automation. Too many accountants play "ostrich."

9. To ensure the design of proper MAS requires that accountants not only become familiar with MIS technology, but also participate in its application, development, and standardization. Too few accountants seem to recognize the need and get involved.

10. Lack of involvement by accountants in MIS may result in improper automation of many accounting functions and in increasing problems and risks for auditors, companies, and societies. Are accountants abdicating their traditional role as recorders and guardians of assets and economic resources?

An international comparison of GAAP reveals that relatively few attempts are being made to develop new GAAP definitions, that even fewer legal codifications of modernized GAAP are being enacted, and that many of the issues just raised remain open — with serious consequences for accounting and accountants, as well as auditing and auditors.

New GAAP Definitions

Instead of an exhaustive search for and report on nonexisting GAAP definitions in Europe, North America, and elsewhere, this section will summarize attempts to cope with the problem in the Federal Republic of Germany and in the United States. The tradition of codified law and of common law practices in Germany and the United States, respectively, explains the difference in the approach. Although the results are almost identical, it is interesting to trace the developments through several organizations and to identify conceptual patterns which are not always helpful.

While both the German public accounting profession and the Committee on Economic Administration in Business and the Public Sector (Ausschuss für wirtschaftliche Verwaltung in Wirtschaft und öffentlicher Hand e.V. — AWV)[5] provided the "push," American government agencies such as the General Accounting Office (GAO), the National Bureau of Standards (NBS), and the Securities Exchange Commission (SEC) seem to have been more progressive than the American Institute of Certified Public Accountants (AICPA) in establishing new GAAP and GAAS.

Federal Republic of Germany. The discussion in Germany has had profound effects on the codification of GAAP and on the development of AS design, maintenance, and operations criteria. It was dominated by the IdW and the AWV but most recently, the fiscal authorities published new generally accepted storage accounting principles (Grundsätze ordnungsmässiger Speicherbuchführung — GOS).[6]

IDW. The German Institute of Public Accountants' (Institut der Wirtschaftsprüfer — IdW) Committee for Modern Accounting Systems (Fachausschuss für moderne Abrechnungssysteme — FAMA) in 1975 published an important technical opinion "On the Interpretation of Generally Accepted Accounting Principles with the Application of EDP Systems in Accounting,"[7] referred to here as FAMA 1/75. The importance of such pronouncements is exemplified by the fact that no German public accountant (Wirtschaftsprüfer — WP) would deviate in the pursuit of professional activities from these authoritative pronouncements without important and objectively significant reasons.

In the preliminary remarks, FAMA 1/75 recognizes that for computerized accounting systems, "the general acceptability cannot be judged off-hand according to the criteria that are standard for a conventional accounting system." For example, "the readable evidence of [an] accounting entry follows not necessarily but must be provided in case of need."

The FAMA statement addresses (1) the general acceptability of the

[5] See the excellent summary by Deutsche Treuhand-Gesellschaft, *Die handelsrechtlichen Buchführungsvorschriften: Zusammenstellung der Vorschriften und einschlägiger Materialien* (Stand Juni 1977) — referred to as DTG.

[6] Ausschuss für wirtschaftliche Verwaltung in Wirtschaft und öffentlicher Hand e.V. "Grundsätze ordnungsmässiger Speicherbuchführung," reprinted in DTG, Appendix 9.

[7] Fachauschuss für Moderne Abrechnungssysteme, "Zur Auslegung der Grundsätze ordnungsmässiger Buchfhrung beim Einsatz von EDV-Anlagen im Rechnungswesen," Institut der Wirtschaftsprüfer (FAMA 1/75).

processing system; (2) the voucher principle; (3) securing and representation of accounting matter; and (4) the obligation to preserve organization documents. Each of these aspects is summarized in a short thesis which is subsequently explained. The other will translate these theses and comment briefly on the issues addressed.

General Acceptability of the Processing System. Thesis:

A generally accepted edp accounting system, regardless of whether it maintains the accounting matter on magnetic data storage media, can only be realized in the context of an organizationally accordingly designed [sic] processing system. Such a processing system is only then generally acceptable if the general principles of completeness, correctness, timeliness, security and auditability are met. The essential components of the system are the organization of the data processing department, of the data recording function and of the procedures; the processing programs as well as the used edp system including its operating system.

Note the established criteria for acceptability, namely *completeness, correctness, timeliness, security,* and *auditability,* as they are applied to the data recording function, the processing functions, the programs, and to the (EDP) systems and the operating system. The required controls are derived from electronic data processing these criteria and augmented by *separation of incompatible functions* such as system design and programming on the one hand, and work measurement and machine operations on the other hand.

The FAMA statement also includes the following sentence: "The data processing department must not have professional responsibility for the work functions supported by it." As more and more organizational functions are computer supported, integrated, and even automated, information processing responsibilities are centralized. It sometimes becomes difficult to distinguish the local responsibilities of a user department for its own information management, from the global responsibilities of administering data, text, models, and computers for these users. Evidently, a set of criteria is required to accommodate the increasing integration of information-processing functions. While completeness, correctness, timeliness, and security are defined in the context of recording, processing, programs, EDP systems, and operating systems, auditability remains undefined. This will be discussed later.

The Voucher Principle. Thesis:

The voucher requirement is not touched in its essence by the fact that accounting is done with EDP systems or maintained in machine readable form

on magnetic data storage media. The kind of accounting technique does not change the principle that a separate record must be present for all accountable transactions although the form of the vouchers and the type of their storage can be modified through the use of EDP systems.

Insofar as the law prescribes a visual representation of the vouchers, storage of their contents on data storage media alone does not meet the voucher function.

The German laws do not expressly require that every accounting entry must be represented by a voucher, although it is implied. (See later reference to the legal codifications.) Nevertheless, the voucher principle is a basic presupposition for the probative force of accounting in Germany. To meet the documentation and proof function, a voucher must contain the following components according to FAMA 1/75: (1) voucher text (explanation and if need be, reason for the transaction), (2) amount to be recorded or quantity and value data which result in the amount to be recorded, (3) date of origination, and (4) firm or name of the proponent, in case of own vouchers generally with the signature or initials of the responsible person. According to FAMA 1/75, these elements are augmented during the accounting treatment of the voucher by the following components: (1) account classification, (2) voucher number and order criterion for filing, respectively, and (3) recording date (identification of input into the system).

Due to the fact that these voucher criteria can be accomplished in numerous ways in a computer environment, it is interesting to note *the ultimate criterion* for the voucher function according to FAMA 1/75 is "whether it represents for an expert third party within a reasonable amount of time a sufficiently secure, clear, and understandable proof of the transactions; program documents can also belong to it."

Translated into North American concepts, the German public accountants acknowledge that an audit/management/transaction trail does not have to be visible. It can be guaranteed by means of data entries and logs at different points in an accounting process and/or by a well-controlled processing system. The ultimate criteria are printability and auditability.

Securing and Representation of Accounting Matter. Thesis:

Accountable transactions are to be recorded completely and as soon as possible after their origination such that their further accounting treatment is secured and that it can be traced at any time and be audited. In case of storage on magnetic data storage media, the completeness of the storage must be provable against the input. A compelling control between the input and the sub-

sequent processing must be secured (e.g. by means of balancing and checking).

In case of current and periodic printing of accounting matter, the same requirements are to be met by the computer supported accounting system that are also valid for a conventional accounting system. In case of an electronic accounting system which has recorded in a controllable manner on data storage media all or a part of the original data and transactions as well as those originated by the system (substitute voucher identity) proof of the accounting process will be established by means of printability. It must be guaranteed beyond the end of the business year during the whole retention period.

The requirements for the accounting treatment of aggregated figures on subject accounts cannot be made more stringent than before. The judgment of general acceptability is based on the ability to clarify the substance of the sum accumulated for a period or for a subject term within a reasonable time.

Printability is first explained in the FAMA 1/75 statement in general with respect to the journal function and the accountant function. The journal function is defined as the timely and orderly printing (on paper or microfilm) of accounting matter at the data origination (data conversion) phase, at the data input phase, and in the context of machine processing. The journal function is also referred to as the securing function in the German literature.[8] Each phase is to be controlled to ensure timeliness, order, and completeness, and printability includes error protocols. Automatically generated transactions must be logged and maintained in a printable manner to be acceptable.

The account function is defined as printing according to subject sequence and is to contain the following details: (1) account name, (2) proof of uninterrupted page sequence, (3) column headings, (4) identification of records, sums and balances according to debit and credit, (5) recording data, and (6) voucher reference. *Printability* is then specifically defined for computer accounting systems and is only guaranteed according to generally accepted accounting principles,

if the records can be printed as traceable to the voucher
- according to time and subject sequence,
- in clear and understandable form,
- complete as well as samples,
- within a short time.

The printout must have the form required by the respective purpose (journal or account) and must contain the necessary details.[9]

Printability is assured according to FAMA 1/75 if data availability,

[8] DTG.
[9] FAMA 1/75.

EDP system availability, and program availability are secured technologically and organizationally independent of the data structures, the location and ownership of the EDP system, or the operating system. Printability can be assured by means of utility programs, provided they can be used without further modification and by means of readily available control or parameter cards.

In summary, the German GAAP insist on printability on short notice, and they require reproducibility of complete transaction trails to make accounting matter visible and traceable.

Obligation to Preserve Organization Documents. Thesis:

> Organization and program documents are then subject to the legal norms for retention periods if these documents are necessary in detail for the understanding as well as for the proof of the acceptability of the accounting system and of the procedure upon which it is based.

These documents include dictionaries and indices which are required to understand the accounting system.

In summary, the German public accounting profession has attempted to establish specific criteria which govern the internal controls of all accounting systems as well as their general acceptability.

AWV. It is now interesting to note the efforts made by the AWV to explain the essence of accounting systems in the context of modern information technology.[10]

A distinction is made between "storage accounting systems" and "conventional EDP accounting systems" as follows:

> The storage accounting system is characterized by the fact that entries are recorded (stored) on machine-readable data storage media and legible according to demand for each required purpose singly or cumulatively (condensed). The entries must be representable especially singly and ordered according to accounts, the latter perpetual according to account sums or balances as well as according to final report positions. It must be possible to make them legible at any time in a reasonable amount of time.
>
> The conventional EDP accounting system is characterized by the fact that entries which are recorded on machine-readable data storage media are completely and permanently legible (visually) independent of audit requirements after the processing and that these data storage media are erased after audit of the correct and complete copies. Conventional EDP accounting systems and storage accounting systems can also exist in mixed form.[11]

The criterion for the distinction between storage accounting sys-

[10] DTG, Appendix 9.
[11] Ibid.

tems and conventional EDP systems has been officially explained by the federal minister of finance as "processable" and "processed" data storage, respectively.[12] Unfortunately, the problem is still not clear. Storage accounting systems are evidently data bank systems according to our definitions beginning on page 171, but nowhere does the AWV paper make reference to data bases and DBMS. The paper stresses that GAAP are valid for these AS in the same way as for other accounting techniques and addresses the following topics in crisp and concise sentences: (1) voucher processing and voucher function, (2) posting, (3) control and checking, (4) data security, (5) documentation and auditability, (6) retention and security of data storage media, (7) output of stored records, and (8) responsibility.

It is impossible to summarize the details here on each of these topics, but it is interesting to note the data orientation when programs are likewise stored on electronic media and subject to similar controls. The model bank analogies are simply not perceived. The AWV paper contains a number of noteworthy points and concludes with the statement that accountants are responsible for the observation of GAAP in the storage accounting (data bank) environment.

These discussions have resulted in the identification of specific criteria which modern AS must meet to be acceptable. The establishment of auditability as a special criterion is likewise noteworthy and will be discussed below in more detail.

As far as the author can determine, the FAMA 1/75 statement, the AWV paper, and the explanation of the AWV paper by the minister of finance are the only pronouncements of their kind in the international accounting literature. They deserve attention, and all FAMA statements will be made available soon by the IdW in an English translation. It is now interesting to compare these German developments with pronouncements in the United States.

United States of America. The discussion of GAAP in the United States has been dominated by the AICPA, the NBS, and the GAO, but it continues and seems far from resolved.

AICPA. The discussion of GAAP has a long tradition in the United States; however, it is interesting to note that the Accounting Research Study No. 7, *Inventory of Generally Accepted Accounting Principles*

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[12] Begleitschreiben des Bundesministers der Finanzen betr. "Grundsätze ordnungsmässiger Speicherbuchführung (GOS)," *Bundessteuerblatt* 1978, Teil I, pp. 250-51.

for Business Enterprises, by Paul Grady, published in 1965,[13] contains references neither to the *recording* aspects nor to the design of AS. This seems surprising for the country with the largest number of computers applied in its business enterprises and government agencies, even in 1965.

The emphasis in North America on accounting systems design and operations has been in terms of "internal controls" as defined by the AICPA between 1948 and 1979 in different versions and pronouncements. The problems of computerized accounting are therefore discussed in the AICPA-sponsored literature and in the various AICPA pronouncements and statements such as "internal control in EDP systems,"[14] as "control in advanced EDP systems,"[15] and as "internal accounting control."[16]

With almost all routine accounting applications computerized in North America on the basis of detailed data collection and data storage for most functional areas of organizations, GAAP (understood primarily as reporting practices and methods) are being supplemented by computer control and security guidelines in the United States. Numerous control frameworks exist and are being developed, but none of these refer to GAAP. It seems as if accountants have forgotten their traditional role as designers and operators of information systems.

Internal control is no longer meaningfully defined merely as accounting control and as administrative control according to the traditional AICPA definition:

> *Administrative control* includes, but is not limited to, the plan of organization and the procedures and records that are concerned with the decision processes leading to management's authorization of transactions. Such authorization is a management function directly associated with the responsibility of achieving the objectives of the organization and is the starting point for establishing accounting control of transactions.
>
> *Accounting control* comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records and consequently are designed to provide reasonable assurance that:
>
> a. Transactions are executed in accordance with management's general or specific authorization.

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[13] Paul Grady, *Inventory of Generally Accepted Accounting Principles for Business Enterprises,* Accounting Research Study #7 (New York: AICPA, 1965).
[14] AICPA, *The Auditor's Study and Evaluation of Internal Control in EDP Systems* (Audit and Accounting Guide) (New York: AICPA, 1977).
[15] AICPA, *Management, Control and Audit of Advanced EDP Systems* (Computer Services Guideline) (New York: AICPA, 1977).
[16] AICPA, *Tentative Report of the Special Advisory Committee on Internal Accounting Control* (New York: AICPA, 1978).

b. Transactions are recorded as necessary (1) to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements and (2) maintain accountability for assets.
c. Access to assets is permitted only in accordance with management's authorization.
d. The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.[17]

While it is not intended to comment here in detail on the accounting controls, it is interesting to note that timeliness is rather loosely defined and that printability and auditability are never mentioned in the context of accounting control in SAS No. 1. On the other hand, the concept of administrative control is broadly defined and includes specific references to authorization of transactions. Recognition of security issues may be implied in the combination of authorization and access controls to assets, but the issue cannot be considered as resolved by clinging to the old concepts without proper redefinitions in the computer age.

The AICPA's Special Advisory Committee on Internal Accounting Control has recently recognized this difficulty of distinguishing the concept of administrative control from accounting control. It considers "the internal accounting control environment" as the supersystem in which the AS is imbedded. Although never stated as such, when discussing EDP considerations, the following observations are made:

Some of the tasks frequently performed in the EDP process itself are listed below:

* Initiation, authorization, execution, and reporting of transactions according to pre-established rules. Examples might include interest and depreciation calculations, orders to purchase or ship merchandise, and automatic preparation of checks for repetitive payments, such as dividends, employee benefits, or freight settlements.
* Preparation or processing of documents that authorize the use or disposition of assets. This indirect access may occur in connection with transactions that are computer initiated.
* Performance of the full range of accounting functions, that is, recording, classifying, summarizing, and reporting transactions.
* Implementation of accounting controls. Those controls may relate to internally generated transactions, internal processing, or internal files, as well as data submitted for processing.[18]

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[17] AICPA, *Statement on Auditing Standards No. 1* (SAS No. 1) (New York: AICPA, 1973), § 320.27-28.

[18] AICPA, *Internal Accounting Control,* p. 12.

Since all "internal accounting controls" can be imbedded in the "internal accounting control environment," the AICPA recognizes that AS can be part of MIS. The consequent application of the MIS concepts (as outlined on pages 171-77) to AS leads us now to the problem of whether the conventional distinction between "general controls" and "application controls"[19] is still meaningful and how it can be interpreted in the context of internal control and GAAP. Many local application-data controls are being implemented as controls over the data base by means of DBMS. Correspondingly, many application-program controls will be imbedded as model-base controls in global MBMS. The conventional input-processing-output control framework applied to each application will therefore be superceded by local data management controls and model management controls, respectively which are themselves governed by global data administration and model-administration controls, respectively.[20] MIS considerations can no longer be isolated meaningfully from organizational considerations, and neither can EDP considerations be usefully separated from AS considerations at the current state of modern information technology.

GAO. It is now interesting to observe how the AICPA and the NBS approaches to the problem are being integrated in the United States. Note that the AICPA is almost always guided by audit implications and that the discussion of internal controls in the United States has been "biased" from an audit viewpoint. The United States accounting literature has almost completely neglected the design, control, and operations of accounting systems and the naiveté of many information systems analysts and designers concerning auditability, controls, and security is thus explainable.

The General Accounting Office of the United States has issued *Additional GAO Audit Standards: Auditing Computer-Based Systems*[21] which became effective January 1, 1980. Although these standards are described as audit standards — and will be mentioned again in the auditing section of this paper — it is interesting to note that they establish criteria that may be considered GAAP: *reliability, security, timeliness, accuracy,* and *completeness.* Even *auditability* is mentioned, but undefined.[22]

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[19] AICPA, *SAS No. 3,* pp. 3-4.
[20] H. J. Will, "Internal Auditing of Modern Informations Systems," *Managerial Finance* (1980): 171-87.
[21] GAO, *Additional GAO Audit Standards: Auditing Computer-Based Systems,* (Washington: GAO, 1979).
[22] Ibid., p. 5.

Being drafted by auditors, it is not surprising to find AICPA concepts such as "general controls" and "application controls" in the GAO's supplemental standards. On the other hand, the influence of the NBS is clearly recognizable and acknowledged. In fact, both organizations cosponsored two invitational workshops to discuss the issues among experts.[23] The problems seem far from resolved at this point in time, because the required concepts are not well enough developed. The AICPA's Special Advisory Committee on Internal Accounting Control suggests, "Thus, the committee's report is a first step in what should be an ongoing effort by companies, public accounting firms, academics, and professional organizations to study internal accounting control requirements."[24] The problems are clearly not limited to national concerns and should be addressed in the international accounting literature in order to enrich these discussions because the results will affect accounting and auditing profoundly.

NBS. Interestingly, the National Bureau of Standards refers to the issues in terms of "computer security." NBS is circulating draft guidelines entitled *Security for Computer Applications*[25] which apply to the planning, development, and operation of secure computer applications.

> Computer security concerns the protection of computers and their services from all natural and man-made hazards. As computers perform more and more critical services and as the opportunities for effective human review become fewer, the most serious security concerns often become a matter of performance assurance — an assurance that the computer performs its critical functions correctly and that there are no harmful side-effects. Computer services must be protected not only from physical threats such as damage and theft but also from internal vulnerabilities such as programming errors and misuse by authorized users.[26]

These definitions are deliberately broad. They focus on computer applications controls and combine both internal control and audit considerations under the new term "performance assurance."

The NBS identifies a number of "basic controls" in its security guideline. These are entitled (1) data validations, (2) user identity verification, (3) authorization, (4) journalling, (5) variance detection, and (6) encryption.

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[23] Zella G. Ruthberg and Robert G. McKenzie, eds., *Proceedings NBS Invitational Workshops on Audit and Evaluation of Computer Security* (Washington, D.C.: NBS, 1977 and 1980).

[24] AICPA, *Internal Accounting Control,* p. 7.

[25] NBS, "Security for Computer Applications," Draft, 13 December 1979 (Washington, D.C.: NBS, 1979).

[26] Ibid., p. 10.

Each of these address a number of problems as follows.

Data Validations.

Invalid data leads [*sic*] to erroneous outputs and is usually the proximate cause of harmful human, social, and economic effects.

Invalid data can destroy the credibility of the system, demoralize those trying to use it, cause excessive system maintenance costs, and in extreme cases cause the system to be unavailable or unusable.[27]

User Identity Verification.

Identity verification is necessary if access to the system's data and resources is to be controlled.

Users cannot be held accountable for their actions unless they are positively identified.[28]

Authorization.

If several people are to use an application that maintains diverse information, then data confidentiality and data integrity will not be preserved unless each user is allowed access to only that information which he needs.[29]

Journalling.

It is difficult to detect security violations unless there is a record of system events which can be analyzed.

Users are less likely to engage in malicious activities and to make errors in their day-to-day interaction with the system if they know that their activity may be recorded.

Recovery from system failures is aided by journalling appropriate events.[30]

Variance Detection.

Fraud, embezzlement and other misuse of the system and its data by authorized users of the system.

Undesirable modification or disclosure of information that remains hidden from management review.[31]

Encryption.

Disclosure and undetected modification of information during its transmission from one site to another.

[27] Ibid., p. 19.
[28] Ibid., p. 23.
[29] Ibid., p. 26.
[30] Ibid., pp. 31-32.
[31] Ibid., p. 36.

Disclosure of information when tapes or other storage media are lost or stolen.[23]

The basic controls are deliberately general and may be viewed as a first set of generally accepted information principles (GAIP). A detailed analysis indicates that the "basic controls" identified in the NBS draft are obviously broader than the German GAAP. In part they are almost identical with the GAAP of the German IdW, although they do not contain auditability as an explicit criterion, whereas encryption is not mentioned by the IdW. The all-pervasiveness of information technology is clearly reflected in the NBS approach, and the computer applications addressed go beyond traditional accounting applications.

New Codifications

In line with the general neglect of computer technology in legal codifications nationally and internationally, it is not surprising to find little reference to modern information methods and techniques in the laws of most countries. Instead of changing the laws, most countries reinterpret traditional references to GAAP and accounting requirements in their respective laws. This is easier to tolerate in common law cultures and jurisdictions but creates more problems in countries with codified laws.

An interesting example is again provided by the Federal Republic of Germany with its changes to the Handelsgesetzbuch (HGB), the Commercial Code, and the Abgabenordnung (AO), the Basic Tax Code, as of January 1, 1977. To illustrate the situation in the United States, the Foreign Corrupt Practices Act of 1977 will be discussed briefly with references to the related issuance by the SEC of Accounting Series Release No. 242.

Federal Republic of Germany. The HGB and the AO were changed as of January 1, 1977, after much debate and discussion. These changes recognize the availability of modern information technology and managements' freedom of organizational design and choice of the means. It is impossible to summarize these developments here in any detail; however, it should be interesting to see to what extent these laws reflect GAAP criteria formally. The relevant paragraphs of the HGB and the AO will be presented side by side in the appendix in translated form to illustrate the high degree of correspondence between the Commercial Code (HGB) and the Basic Tax Code (AO) in the

[23] Ibid., p. 41.

Federal Republic of Germany. [To facilitate such juxtaposition, the sequence of the sections (par.) in §146AO has been changed.]

These laws and regulations allow considerable freedom for the design of efficient and effective AS, including changes in data organization and storage media within the retention period. If data are originated in electronic form instead of on readable vouchers, then they can be retained in their original form or copied onto another data storage medium for retention purposes, provided such copying is controlled.

In the light of text processing and in view of the potential for electronic mail, it seems surprising that these advanced laws still require pictorial copies of the business letters and vouchers. Technology seems to continue outpacing legal codification even in the most progressive countries! When HGB and AO refer to "balance sheets" in §44 par. 3 and §147 par. (2), respectively, the annual reports are meant, but it is also surprising that these regulations seem to eliminate microfiche copies of these reports or outside terminal access to permitted annual report files on electronic media in the MIS of the organization or in a service bureau.

United States. The Foreign Corrupt Practices Act (FCPA) of 1977 contains a verbatim quote of the AICPA's definition of internal accounting controls. As explained in the SEC's Accounting Series Release No. 242 (ASR No. 242), the FCPA requires

> every issuer which has a class of securities registered pursuant to Section 12 of the Securities Exchange Act, and every issuer which is required to file reports pursuant to Section 15(d) of the Securities Exchange Act, to comply with certain accounting standards.

Those standards are set forth in section 102(2) of the act and require issuers to —

> (a) make and keep books, records, and accounts, which in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer; and
>
> (b) devise and maintain a system of internal accounting controls sufficient to provide reasonable assurances that —
>
> (i) transactions are executed in accordance with management's general or specific authorization;
>
> (ii) transactions are recorded as necessary (I) to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements, and (II) to maintain accountability for assets;
>
> (iii) access to assets is permitted only in accordance with management's general or specific authorization; and

(iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.[33]

ASR No. 242 emphasizes that

because the Act became effective upon signing, it is important that issuers subject to the new requirements review their accounting procedures, systems of internal accounting controls and business practices in order that they may take any actions necessary to comply with the requirements contained in the Act.

However, ASR No. 242 does not specify what should be involved in such a review.[34]

The audit implications will be referred to again, but to the author's knowledge, no new act in the United States establishes GAAP as systems design and maintenance criteria in the computer age.

Open Issues

Lack of a generally accepted conceptual framework for MIS and MAS and failure to reconsider accounting in systems perspective are probably the major reasons for the surprising neglect of modernized GAAP in the international accounting literature. The difficulty of establishing GAAP in such a manner that they become equivalent to GAIP or a subset of GAIP is another aspect of the same problem, and yet it was possible to illustrate how the independent developments in Germany and in the United States are converging.

Nationally, these problems are not isolated from privacy concerns, although they are seldom seen this way.[35] Internationally, MAS and MIS are complicated by transnational data-flow considerations.[36] In short, computerized accounting systems are enmeshed in a nonaccounting environment that determines their structure and behavior profoundly. To ignore these conditions of accounting would mean to close one's eyes to the fact that information technology determines the

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[33] *Foreign Corrupt Practices Act,* 1977.

[34] SEC, *Accounting Series Release,* No. 242.

[35] David F. Linowes, "The Accounting Profession and Privacy," *CPA Journal,* New York State Society of Certified Public Accountants (September 1976): pp. 9-11; see also Privacy Protection Study Commission, *Personal Privacy in an Information Society* (Washington, D.C.: U.S. Government Printing Office, July 1977).

[36] Eric J. Novotny, "Restrictions on the Transnational Flow of Corporate Information: New Challenges for the Auditing Profession," *The EDP Auditor* (Summer 1979): 13-33.

growth and survival of organizations as well as the privacy of individuals and the sovereignty of nations. A need exists to "standardize" MIS and MAS in order to limit their variety to controllable dimensions. This can only be accomplished through international cooperation and international and interinstitutional research of the issues raised. Not only costs and benefits of MIS and MAS are at stake, but the auditability of these systems is in jeopardy on an international scale with all its serious implications for freedom, trade, and commerce.

It is always surprising to find that many of the standardization efforts in the computer field such as languages, OS, and DBMS are hardly known to accountants and are seldom supported by accountants or auditors. Since such involvement is time consuming, the accounting and auditing profession could sponsor representatives and coordinate its contributions internationally. The same observations can be made about privacy discussions and transnational data-flow concerns. Has accounting become an "impossible task" or have accountants abdicated their social responsibilities?

AUDITING STANDARDS

Auditing is a control effort and as such governed by the law of requisite variety.[37] Auditors must match the variety of accounting systems in order to test or to regulate these. Auditability of information systems in general and of accounting systems in particular is therefore a dual proposition: either the MAS variety must be reduced to the level of the auditors' requisite computational variety or auditors must increase their own computational power to match the MAS variety. No system can be controlled without requisite variety and auditors must be able to test variety at any point in time if they are to maintain credibility, effectiveness, and efficiency.

Auditability remains a vague concept without specific criteria for the acceptability of AS designs on the one hand and for internal control on the other. It needs to be defined in order to give the auditor a criterion for grading his formal opinion in case of "difficult" MAS designs. By making auditability one of the GAAP, it will constrain the

[37] H. J. Will, "Audit Command Language (ACL): Design Considerations and Impact on Audit Research," *Symposium on Auditing Research* (Urbana-Champaign: Department of Accountancy, University of Illinois, 1976), pp. 53-57. Jordan B. Davis, "Discussion," Ibid., pp. 79-81.

variety of MAS designs to reasonable degrees of complexity while setting fairly high standards for auditing in the MIS environment without limiting anyone to specific computer technology. In fact, as a criterion, it is applicable to manual systems, large-scale computer systems, and minicomputer and microcomputer configurations equally well. Modern computer technology has forced the issue because auditors merely had to be accountants to do their job in the past.

Auditability is the ability of a competent and qualified professional independently (1) to convince himself of the proper design and functioning of an information system and its internal controls, and (2) to form an opinion on the propriety of generated information for the decision purposes of a particular user or group of users within reasonable time limits and without undue difficulties.[38]

This definition captures the intellectual challenge of auditors in the computer environment without assuming away any of the problems. Therefore, it has been used to design an Audit Command Language (ACL)[39] and can be used as a formal criterion both for GAAP and GAIP.

Generally accepted auditing standards (GAAS) have been established in many countries to govern the professional behavior and conduct of auditors, but specific references to computerized accounting systems have been rare so far. In fact, the reluctance to include specific references in the *Handbook* material (Canada) or in the standards publications (Germany and the United States) is symptomatic of the current conceptual crisis in auditing.

It seems difficult to realize that many MAS will be increasingly automatic, invisible, and paperless. More and more internal controls will be programmed and executed automatically. Custom designs will be replaced by DBMS and MBMS. In short, the need for technological expertise will increase for some time before tighter MIS standards can be established, if they ever can be, because auditors will need to evaluate these new internal control systems before they can express opinions concerning the validity and truth (fairness) of the generated information.

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[38] H. J. Will, H. Brussel, and R. A. Clark, "An Invitation to Help Develop New Audit Software," *CA Magazine* (May 1977): 35-39.

[39] H. J. Will, "Audit Command Language Design: A Challenge to and Opportunity for the Profession," in H. J. Will, ed., *Legal and Technical Issues of Computer Auditing,* Proceedings UEC International Symposium on Computer Auditing: Legal and Technical Issues, 18-20 June 1975 (St. Augustine, Fla.: GMD & UEC, 1975), pp. 127-56.

New Definitions

As indicated earlier, very few new definitions of GAAS exist in response to computerization; however, it is worthwhile to look at the situation in Germany, the United States, and Canada. Different degrees of awareness of the problems seem to exist in these countries and it is interesting to note these differences.

Federal Republic of Germany. The IdW refers only once to "automation" in its *Generally Accepted Standards for the Audit of Financial Statements* in the context of "Audit of the internal control system": "With the increasing size of the audited enterprise and growing automation of accounting systems the examination of the internal control becomes more important as an appropriate and predominant audit procedure."[40] Note that an internal control review is not required according to GAAS in Germany, but may be difficult to avoid.

Note two amplifies this sentence briefly and refers to the already mentioned FAMA Technical Opinions 1/1975 and 1/1974: "The audit of the internal control system requires a different approach where electronic data processing equipment is used for accounting purposes (refer to FAMA Technical Opinions 1/1974 and 1/1975)."[41] As stated earlier, the German WPs are to adhere to such statements and professional pronouncements which gives these publications authoritative value:

> If an auditor ignores the principles laid down in statements or technical opinions without good reason or if in such a case he accepts non-compliance with these principles by the enterprise under audit without taking exception (by reference to the long-form audit report or by qualification or disclaimer of the audit opinion), such conduct may be interpreted to his disadvantage in professional disciplinary proceedings and in claims for damages. (Reference to Directives of the Wirtschaftsprüferkammer on professional conduct — ad 11 no. 2).[42]

It is therefore important to look briefly at FAMA technical opinion 1/1974 entitled "Audit of EDP–Accounting Systems." In summarizing the reasons for the adaptation of audit techniques, FAMA 1/1974 states:

> The main emphasis is consequently to be put into the sphere of the audit of the internal control system as well as the EDP-system audit and program audit in order to arrive with justifiable time and expense at meaningful audit results

[40] IdW, *Generally Accepted Standards for the Audit of Financial Statements* (Düsseldorf: Institut der Wirtschaftsprüfer e.V., 1977), p. E.8.
[41] Ibid. Refer to FAMA Technical Opinions 1/1974 and 1/1975.
[42] Ibid., p. E.6.

with respect to completeness, correctness, timeliness and security of the accounting. From this follows a reduction of the previous volume of single case audits. This succeeds the more effectively the stronger the external audit was already tuned into the planning and introduction of the data processing system.[43]

This technical opinion addresses the following issues in considerable detail and contains a "questionnaire for the audit of the control system with the application of EDP-systems in accounting": (1) audit of the internal control system, (a) audit object, (b) audit of internal audit involvement, (c) audit technique, and (d) special problems of audit of the EDP-system and the operating system; (2) audit of the accounting system, (a) application of conventional audit methods, (b) special EDP system audit, and (c) application of EDP system for audit purposes; (3) timing of the audit, (a) audit at program design, (b) audit before program acceptance, and (c) audit after program acceptance; (4) audit of storage and retention, (a) audit of acceptable retention, and (b) audit of data conversion with system changes.[44] Although treated as a special technical opinion, GAAS in Germany are comprehensive but flexible and provide authoritative audit guidance in the context of computerization. They are open-ended and can be easily amended to new technological developments such as DBMS and MBMS.

Of special interest is now the FAMA Technical Opinion 1/1979 on the "Federal Data Protection Act and Audit of Annual Financial Statements."[45] The following assessment of the impact of the FDPA is important:

The FDPA does not represent a legal standard for the regulation of accounting. However, especially in the sphere of bookkeeping, technical and organizational measures are required which serve both the observance of the FDPA and the fulfillment of generally accepted accounting practices. Insofar as these measures are objects of the audit of the internal control system as part of the audit of the annual financial statements:

1. Security measures of the FDPA within the control of the withdrawal, storage, and transport for the protection of data against falsification or loss concern also the general acceptability of accounting and the annual financial statements insofar as these are connected with accounting.
2. On the other hand, the general acceptability of the accounting system and of the annual financial statements are not concerned with:

[43]FAMA, Prüfung von EDV Buchführungen" (Düsseldorf: IdW, 1974) (FAMA 1/1974).
[44] Ibid.
[45] FAMA, "Bundesdatenschutzgesetz und Jahresabschlussprüfung" (Düsseldorf: IdW, 1979) (FAMA 1/1979).

a. Security measures of the FDPA for data that are unrelated to accounting (for example, noncustomer files).
b. Security measures of the FDPA against the unauthorized retrieval of all kinds.[46]

The consequence of this technical opinion is that auditors must be concerned with data protection "insofar as input, change and deletion of data are affected" in the context of additions control for persons, user control, access control, and transmissions control, and "insofar as generally accepted accounting is concerned" with deletion control for storage media, storage control, input control, transport control, and organization control. "Insofar as the accounting system is affected," the audit activities also cover the "audit of the proper application of the data processing programs by means of which personal data are processed."[47]

The United States. Again, it is important to recognize the role of the AICPA, the GAO, and the NBS in defining GAAS.

AICPA. The *Statement on Auditing Standards No. 3* (SAS #3) of 1974 is entitled "The Effects of EDP on the Auditor's Study and Evaluation of Internal Control" and "is intended to provide a framework for the development of further guidance auditing procedures in examining financial statements of entities that use EDP in accounting applications."[48]

SAS are considered as interpretations of generally accepted auditing standards to which AICPA members are required to adhere. They must also be prepared to justify departures from them.

According to the second standard of field work, "There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted."[49] This review of the system should not ignore computer applications according to SAS #3, §§24-26:

24. An auditor's review of a client's system of accounting control should encompass all significant and relevant manual, mechanical, and EDP activities and the interrelationship between EDP and user department. . . .
25. The preliminary phase of an auditor's review should be designed to provide an understanding of the flow of transactions through the accounting system, the extent to which EDP is used in each significant accounting appli-

[46] Ibid.
[47] Ibid., Appendix.
[48] SAS No. 3, footnote 4.
[49] SAS No. 1, § 320.01.

cation, and the basic structure of accounting control. . . . Such preliminary understanding of EDP procedures normally relates to the general controls and application controls. . . .
26. After completing the preliminary phase of his review as described in paragraph 25, for each significant accounting application the auditor should be in a position to assess the significance of accounting control within EDP in relation to the entire system of accounting control and therefore to determine the extent of his review of EDP accounting control.

This framework has been amplified in the AICPA's Audit and Accounting Guide, *The Auditor's Study and Evaluation of Internal Control in EDP Systems,* in 1977. According to a "notice to readers" each audit and accounting guide

. . . represents recommendations only as to auditing procedures. Any description of current financial accounting and reporting practices is not intended to suggest preferable practices.
This guide was developed by the AICPA Computer Services Executive Committee and has been reviewed by members of the AICPA Auditing Standards Executive Committee. Although it does not have the authority of a pronouncement by that committee, AICPA members may have to justify departure from the auditing procedures contained in the guide if their work is challenged.

Depending on one's interpretation of this notice to the readers, this guide represents a descriptive or a normative model of the audit approach expected of AICPA members. Since it has been flowcharted and explained in chapter 2 of the guide, no need exists to repeat any of these details here; however, it should be interesting to compare this model with others advanced in the international literature.[50]

In addition to the audit and accounting guides, the AICPA's Computer Services Executive Committee has published several Computer Services Guidelines as recommendations on various topics: *Management, Control and Audit of Advanced EDP Systems,* 1977; *Audit Considerations in Electronic Funds Transfer Systems,* 1978; *Controls over Using and Changing Computer Programs,* 1979; and *Audit Approaches for a Computerized Inventory System,* 1980.

Each of these contains audit recommendations and may be considered as tests of the AICPA's audit model. As indicated in the section beginning on page 177, the AICPA is aware of the problems and welcomes further discussion. In fact, the "1978 Report, Conclusions, and Recommendations of the AICPA's Commission on Auditors' Responsibilities" states:

[50] H. J. Will, "Discernible Trends and Overlooked Opportunities in Audit Software," *EDP Auditor* (Winter 1978): 21-45.

The auditor's study and evaluation of the internal accounting control system should be expanded beyond what is now required by generally accepted auditing standards. The auditor should review and test the entire accounting control system. The objective of this study and evaluation would be to enable the auditor to reach a conclusion on whether controls over each significant part of the accounting system provide reasonable, though not absolute, assurance that the system is free of material weaknesses.[51]

The following statement in the same conclusions is even stronger if received against earlier pronouncements and explications of GAAS by the AICPA: "The standard of professional skill and care should be amplified to require a study and evaluation of controls that have a significant bearing on the prevention and detection of fraud."[52]

GAO. In its unique role, the GAO has issued supplemental standards, effective January 1, 1980, for *Auditing Computer-Based Systems:*

1. The auditor shall actively participate in reviewing the design and development of new data processing systems or applications, and significant modification thereto, as a normal part of the audit function.
2. The auditor shall review general controls in data processing systems to determine that (A) controls have been designed according to management direction and legal requirements, and (B) such controls are operating effectively to provide reliability of, and security over, the data being processed.
3. The auditor shall review application control of installed data processing applications to assess their reliability in processing data in a timely, accurate, and complete manner.[53]

These three supplemental standards are presented and discussed in the succeeding sections of the GAO publication. The standards go clearly beyond the traditional accounting and auditing scope. For example, the underlying rationale for the first standard reads as follows: "Both auditors and management officials have interest in assuring that system design, development, and overall operations achieve the objectives of adequate internal controls and effective auditability."[54]

Six objectives are specified for the first standard — they may even be called GAIP:

1. To assure that systems/applications faithfully carry out the policies management has prescribed for the system.
2. To provide assurance that systems/applications provide the controls and audit trails needed for management, auditor and operational review.
3. To provide assurance to management that systems/applications include the controls necessary to protect against loss or serious error.

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[51] Quoted from GAO, *Audit Standards.*
[52] Ibid.
[53] Ibid.
[54] Ibid., p. 5.

4. To provide assurance that systems/applications will be efficient and economical in operation.
5. To assure that systems/applications conform with applicable legal requirements.
6. To provide assurance that systems/applications are documented in a manner that will provide the understanding of the system required for appropriate maintenance and auditing.[55]

Equally important but consequent in considering auditing as a control effort, the discussion of the third standard concludes:

Finally, the auditor must be alert to the possibility of fraud or other irregularities in computer systems. Although auditing for fraud is usually not the primary objective of audits, the detection of fraud should be a general audit objective.[56]

These quotes illustrate how broadly GAAS are already interpreted in the United States and point the way to "generally accepted audit standards for information systems" (GAASIS).

NBS. On the basis of the already mentioned two invitational workshops on "Audit and Evaluation of Computer Security," the NBS is currently preparing a guide under the same title for federal government computer applications. It may even become the first statement of GAASIS.

Canada. After having pioneered the *Computer Control Guidelines* (CCG)[57] in 1970 and the *Computer Audit Guidelines* (GAG)[58] in 1975, the Canadian Institute of Chartered Accountants (CICA) has hardly upgraded the *CICA Handbook* with new concepts and terminology adequate in the computer age. In fact, both the CCG and the CAG studies carry a disclaimer:

This study is one of a series commissioned by the Auditing Standards Committee as part of the Institute's continuing research program. Each study in the series expresses the views of the author or authors concerned, but the studies have not been adopted, endorsed, approved, disapproved or otherwise acted upon by the Committee or the governing body of membership of the CICA or any provincial Institute or Order.

These studies are intended to stimulate thought, discussion and debate on matters of auditing theory and practice. The Committee earnestly solicits comments from readers on the matters dealt with in the studies.[59]

It is another irony of history that the Canadian public accounting profession should be so slow in recognizing the internationally ac-

[55] Ibid., pp. 5-8.
[56] Ibid., p. 15.
[57] CICA, *Computer Control Guidelines* (Toronto: CICA, 1970).
[58] CICA, *Computer Audit Guidelines* (Toronto: CICA, 1975).
[59] Ibid.

claimed contributions of some of its pioneering members. Canadian GAAS allow an auditor

> ... to design a tentative audit strategy based on intended reliance on those internal control systems which are said to exist, and on devising other auditing procedures in respect to those internal control systems which are said to be absent. In so doing, the auditor would have regard to the types of error and irregularity that could occur. His tentative strategy would normally not envisage reliance on systems where there are other more efficient ways of gaining assurance about the reliability of that particular aspect of the accounting records.[60]

In other words, the Canadian CA can prejudice a situation and in fact avoid computer systems reviews, because the second "examination standard" is loosely defined: "There should be an appropriately organized study and evaluation of those internal controls on which the auditor subsequently relies in determining the nature, extent and timing of auditing procedures."[61] These weaknesses of GAAS in Canada have been discussed in the literature, and the reader is referred to those publications.[62]

New Codifications

GAAS are seldom, if ever, legally prescribed. Let us again look at Germany, the United States, and Canada.

Federal Republic of Germany. In the preliminary remarks of Statement 1/1977 of the IdW, the situation in Germany is well characterized as follows:

> The laws which prescribe the audits of the annual financial statements for certain enterprises contain no detailed provisions regarding the conduct of the examination. The legislator obviously assumes that it is not possible to regulate by law all the questions connected with the conduct of an audit and that it is not appropriate to limit developments in this area by setting rigid standards. The auditor must therefore exercise his professional judgment in determining the nature and scope of audit procedures applicable in each case. In so doing he should follow the standards which derive from the objectives of the audit of financial statements.[63]

United States. No codification of GAAS is available or planned beyond the rules applying to members of the AICPA and the GAO;

[60] *CICA Handbook* (Toronto: CICA), Section 5215.06.
[61] Ibid., Section 5100.02.
[62] John A. B. Callum and J. Efrim Boritz, "Applications of Audit Standards to Computerized Accounting Systems," *Proceedings CICA Symposium on Computers and Auditing* (Toronto: CICA, 1978), reprinted as "EDP Systems need GAAS," *CA Magazine* (January 1979): 34-39.
[63] IdW, *Statement 1/1977,* pp. E.2-3.

however, it is possible that the new NBS guide may be codified in one form or another at some later date.

Canada. No legal codification of GAAS exist in Canada. According to the *CICA Handbook.*

> GENERALLY ACCEPTED AUDITING STANDARDS, Section 5100, constitute the basic professional standards with which, in the [Auditing Standards] Committee's view, the auditor should comply when reporting on financial statements. In exercising his professional judgment as to the procedures required for adherence to such basic standards, the auditor should have regard to the other Auditing Recommendations in the Handbook. The general and examination standards are also applicable to other types of attest engagements. . . .
>
> In issuing Recommendations, the Auditing Standards Committee recognizes that no rule of general application can be phrased to suit all circumstances or combination of circumstances that may arise, nor is there any substitute for the exercise of professional judgment in the determination of what constitutes fair presentation or good practice in a particular case.[64]

Open Issues

The previous discussion indicated that almost all aspects of traditional GAAS are being challenged or rethought. They must be considered as open for discussion both at the national and international levels. In fact, both accounting and auditing are much wider in scope than ever before, because information technology pervades every aspect of private and public life within nations and among them.

Among the other unresolved issues are the audit treatment of the privacy laws as referred to in the IdW (Germany) and GAO (U.S.) references. Another important issue is the restrictions on the transnational flow of information. They require specific international attention from an audit point of view as well as from an accounting perspective.

CONCLUSIONS

Accountants have ignored computers and modern information technology for too long. As a universal symbol processing system, computers are being employed at increasing numbers in all organizations, nationally and internationally. They change not only AS but whole organizations. Not only individuals and their privacy are affected but also the interorganizational communication within and across national boundaries is subject to new legal requirements and constraints.

Computerized accounting has become an international issue of in-

[64] *CICA Handbook,* Introduction to Audit Recommendations.

formation processing and communication. Today it is not only important to harmonize and standardize GAAP but to develop new GAIP. The leading industrial nations, the United States and Germany, have approached the problem independently from an "inductive" and "deductive" perspective, respectively. Their conclusions are compatible and converging, although not identical. It is vitally important to pursue the questions raised in this paper both from a national and an international perspective to identify the problems faced in "information societies" and to compare solutions developed anywhere.

Standardization of GAAP or GAIP and of GAAS or GAASIS are valuable goals, but it is equally important for accountants and auditors to realize that standardization of OS, DBMS, and MBMS is an area that will affect them profoundly. Not only in self-defense should such standardization and legal discussions be attended by accountants and auditors, but it should have become clear that today's information specialists and society are eager and willing to learn from the oldest information processing profession.

APPENDIX

HBG	AO
	§145 (General Requirements for Accounting Systems and Records)
	(1) The accounting system must be designed such that it can provide to an expert third party within reasonable time an overview over the transactions and over the property mass of the enterprise. The transactions must be traceable in their origin and processing.
	(2) Records are to be maintained such that the purpose is achieved which they are to serve for taxation.
§143 (Keeping of Commercial Books)	§146 (Regulations for Accounting Systems and for Records)
(1) In keeping of the commercial books and for the otherwise required records the businessman has to make use of a living language. If abbreviations, digits, letters or symbols are used their meaning must be unequivocally laid down in each individual case.	(3) The book entries and the otherwise required records are to be made in a living language. If another than the German language is used then the fiscal authorities can require translations. If abbreviations, digits, letters or symbols are used their meaning must be unequivocally laid down in each individual case.
	(2) Books and otherwise required records are to be maintained and stored in the validity sphere of this law. This does not hold, insofar as for plants outside of the validity sphere of this law an obligation exists according to the law there to maintain books and records and this obligation is met.
(2) The entries in books and the otherwise required records must be made completely, correctly, timely and in order.	(1) The book entries and the otherwise required records must be made completely, correctly, timely and in order. Cash receipts and cash disbursement shall be recorded daily.

HBG	AO
(3) An entry or a record must not be changed in a way that the original content is no longer identifiable. Also, such changes must not be made the quality of which leaves it uncertain whether they have been made originally or only later.	(4) A book entry or a record must not be changed in a way that the original content is no longer identifiable. Also, such changes must not be made the quality of which leaves it uncertain whether they have been made originally or only later.
(4) The commercial books and the otherwise required records can also consist of the ordered file of vouchers or be maintained on data storage means insofar as these forms of accounting and the used procedure match the generally accepted accounting principles.	(5) The books and the otherwise required records can also consist of the ordered file of vouchers or be maintained on data storage means insofar as these forms of accounting and the used procedure match the generally accepted accounting principles; for records which are to be maintained only according to the tax laws, the acceptability of the used procedures is determined according to the purpose which the records are to serve for taxation.
In maintaining books and the otherwise required records on data storage means it must be especially secured that the data are available during the retention period and that they can be made readable at any time within a reasonable time. Para 1 through 3 hold accordingly.	In maintaining books and the otherwise required records on data storage means it must be especially secured that the data are available during the retention period and that they can be made readable at any time within a reasonable time. Para 1 through 4 hold accordingly.
	(6) The regulations are also valid if the entrepreneur keeps books and records which are important for taxation without being obliged to do so.
§44 (Retention)	§147 (Regulations for the Retention of Records)
(1) Every businessman is required to retain in order the following records:	(1) The following records are to be be maintained in order:

HBG	AO
1. Commercial books, inventories, balance sheets as well as the work procedures and other organizational documents which are required for their understanding,	1. Books and records, inventories, balance sheets as well as the work procedures and other organizational documents which are required for their understanding,
2. the received commercial letters,	(2) the received commercial or business letters,
3. copies of the mailed commercial letters,	3. copies of the mailed commercial or business letters,
4. vouchers for book entries in those books he has to keep according to §38 para 1 (vouchers).	4. booking vouchers,
	5. other records insofar as they are important for taxation.
(2) Commercial letters are only written documents which refer to a commercial transaction.	
(3) With the exception of the balance sheet, in para 1 listed records can also be retained as copy on a picture storage medium or on other data storage media if this corresponds to generally accepted accounting principles and if it is secured that the copies or the data	(2) With the exception of the balance sheet, in para 1 listed records can also be retained as copy on a picture storage medium or on other data storage media if this corresponds to generally accepted accounting principles and if it is secured that the copies or the data
1. correspond pictorially with the received commercial letters and vouchers and with the other records according to content, if they are made legible,	1. correspond with the received commercial or business letters and with the other records according to content, if they are made legible,
2. are available during the retention period and can be made legible at any time within a reasonable time. If the records according to §43 para 4 sentence 1 are provided on data storage media the data can be retained in printed form instead of on data storage media; the printed records can also be retained according to sentence 1.	2. are available during the retention period and can be made legible at any time within a reasonable time. If the records according to §146 para 5 sentence 1 are provided on data storage media the data can be retained in printed form instead of on data storage media; the printed records can also be retained according to sentence 1.

HBG

(4) The records listed in para 1 item 1 are to be retained for ten years and the other in para 1 listed records are to be retained for six years.

AO

(3) The records listed in para 1 item 1 are to be retained for ten years and the other in para 1 listed records are to be retained for six years unless other tax laws allow shorter retention periods. However, the retention period does not expire insofar and so long as the records are important for taxes for which the assessment period has not yet expired; §169 para 2 sentence 2 does not apply.

The Problems of Consolidation of Accounts of a Multinational Enterprise: Shell Group of Companies—Shell Transport and Trading Company, Limited, U.K.

ERIC F. CASTLE*

As the accounts for the calendar year 1979 for the Shell Group of Companies will be published on April 18, only a press release is available for that year's results. Accordingly, the majority of the data in this paper will be based on the 1978 accounts published on 19 April 1979.

Shell and Royal Dutch together control between them operations in some 100 countries where the vast majority of companies operate in the areas of petroleum, natural gas chemicals, metals, and nuclear energy. It is claimed that the group controls 8 percent of the world's output of oil and gas. Formed some seventy years ago, the ultimate controlling companies of the group are Shell Transport and Trading Company, Limited, U.K., and Royal Dutch Petroleum Company N.V. of the Netherlands. Shares of both companies are listed (or quoted) in eight European countries and the United States.

Shell U.K. now has an issued capital of £276 million (m.) divided into 1,104 shares of 25 pence each. There are some 400,000 shareholders of which 96 percent are U.K. residents. The average holding is therefore small, some 276 shares per shareholder, but many hold only 200 shares. Incidentally, these figures are after a recent bonus or

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scrip of 1 for 1. Prices on the London Stock Exchange have recently varied between 320 pence and 400 pence. At 31 March 1980, the price was 336 pence ex div. On the New York exchange, one New York share equals 4 shares of 25 pence each.[1] Royal Dutch Company has some 600,000 shareholders spread more evenly than Shell over nine countries but concentrated in three: Holland, 36 percent; Switzerland, 26 percent; and the United States, 17 percent of the holdings.

Despite the high administrative costs associated with such large numbers of shareholders, Shell management welcomes the wide distribution of ownership. Not only does such a situation reduce the possibility of a take-over by a financial institution, but it also helps to generate interest in the activities of the Shell companies.

The Annual General Meeting held in London each May averages an attendance of some 400 shareholders, large by comparison with other companies, at which the chairman presents a comprehensive review of the year's activities. In addition, shareholders' meetings have recently been held at Edinburgh, Harrogate, and Liverpool where certain top executives have addressed shareholders and answered their questions. The group is ultimately managed by members of the presidium of the board of directors, known as group managing directors, itself a mixture of British and Dutch directors. Shell U.K. holds 40 percent of the interest of the group and the Royal Dutch 60 percent. As is obvious by only having 40 percent, Shell is not a holding company.

Shell Transport and Trading Company Limited holds 40 percent of the equity shareholdings in the Shell Petroleum Company Limited consisting of 102,343,930 B shares of £1 each and 40 percent in Shell Petroleum N.V. of the Netherlands, consisting of 44 B shares of N. fl. 5,000,000 each. Royal Dutch has 60 percent consisting of 153,514,395 A shares of N. fl. in Shell Petroleum Company, Limited, and 60 percent consisting of 66 A shares of N. fl. 5,000,000 each in Shell Petroleum N.V.

The Shell Petroleum Company, Limited, and Shell Petroleum N.V. own directly or indirectly shares in the operating companies. These two are holding companies, while Shell and Royal Dutch are referred to as parent companies.

The reason for two holding companies is largely political; in some areas of the world, Dutch connections are preferred, in others British.

[1] Price for 1978. *Annual Report of the "Shell" Transport and Trading Company, Limited 1978* (Bristol: Shell, 1979), p. 2.

Both holding companies are controlled from London where the financial records are kept. As far as possible, the year end of all companies is December 31, any departures from this date being insignificant. Financial results of the subsidiaries are telexed to London and then immediately confirmed by air mail.

Foreign-currency conversion takes place into £ sterling under the temporal method. Assets are translated at year-end rates of exchange with the exception of property, and plant and equipment deferred charges and inventories, which were translated at rates ruling when the assets were acquired. Provisions related to assets at historical costs are also translated at historical rates; other provisions are translated at year-end rates. Differences on exchange are charged or credited to income currently. Income accounts, except for depreciation, are translated at quarterly average rates of exchange.

Because of a quotation on Wall Street, Shell must meet American standards. Currency translation effects on inventory sold and monetary items calculated according to SFAS No. 8 amounted to a loss of 102 in 1978.

Purchase and selling expenses	(55)
Share of earnings of associated companies	(62)
	(117)
Translation gain on inventories sold	15
	(102)

Once the group figures are in £ sterling, there is no difficulty in transferring the income via dividends to Shell Transport; however, for the Royal Dutch company, a conversion must be made into Dutch guilders. For this purpose, all figures are converted at the year-end rate (31 December 1978).

GROUP INCOME

A look at the 1978 group income compared with that of 1977 shows a decline of 21 percent.

	1978	1977
Earnings from operations	1,427	1,659
Currency translation adjustments	(102)	4
Corporate items (interest, etc.)	(74)	84
Minority interest	(165)	(201)
	£1,086	£1,377

The two main factors affecting the decline were (1) the weakness of the dollar, both U.S. and Canadian, which caused the sterling contribution from these areas to be 18 percent lower; and (2) the method of inventory valuation under FIFO which had considerably benefitted the 1977 results (£145). This will be mentioned later.

A FURTHER LOOK AT INVENTORIES

In a period of rising inventories, whether in physical quantities or values or both, varying results can be obtained according to the basis of valuation adopted. Briefly, one can state that the United Kingdom accepts FIFO, and the United States, LIFO.

At 31 December 1978, group inventories were £3,214 of which £2,969 was valued on the basis of FIFO and £243 under LIFO. It is also further stated that the excess of current cost over carrying value of such LIFO inventory was £430 m. With earnings of £1,086, this is 406 of the earnings suggesting that if FIFO were adopted, the 1979 profit would be £1,516.

It is interesting to refer to the press release for the 1979 accounts. Group income is shown as £3,051 but of this figure £1,120 (about a third), is the result of FIFO valuation or, in the words of the press report, "The net income was some £1,120 higher in 1979 compared with what it would have been, had an inventory method been used throughout the group which more closely matched costs against revenue."

The corresponding effect in 1978 was the reverse, a reduction of £145 m. due to a relative run down of inventories. In reporting the results, the London *Daily Telegraph* wrote,

> In other words, part of Shell's profits have been computed on the basis that the oil it sold yesterday was the oldest and cheapest. Replacement of such stock is, of course, at today's much higher price. To a degree stock profits are phoney.

LIFO is obviously much better, but surely base stock would solve the problem.

As no doubt you are aware, in the United Kingdom, stock relief operates to reduce the tax burden, subject to a limit of 10 percent of the profits of unincorporated enterprises and 15 percent for companies.

ITEMS OF SPECIAL INTEREST

In a large enterprise of this nature, two items deserve special mention, leases and exploration on the one hand, and research and development on the other.

Leases

In 1977, the policy concerning lease capitalization was expanded in accordance with American generally accepted accounting principles. Leases which provide the group with substantially all the benefits and risks of ownership are capitalized as property, plant, and so on at amounts equivalent to the estimated value of the underlying lease payments and are subsequently amortized by changes to income.

Lending arrangements. On the other hand, there were certain commitments in respect of future minimum lease payments under capital leases estimated at £430 on present-day values; £39 due within a year is shown under current liabilities, the balance of £391 under long-term debt. Details are

Total minimum payments	762
Less costs	91
	671
Less interest or discounting factor	241
	£430.

Exploration Costs

The group follows the successful efforts method of accounting whereby costs are charged to income currently with the exception that exploration drilling costs are initially taken to property, plant, and so on, pending determination of commercial reserve discovery. This is a change from the previous year when all drilling costs were charged to income with the appropriate part of the latter costs being capitalized if the well proved to be productive.

Research and Development

Expenditure for research and development is charged to income as incurred except for buildings and major items of equipment which have alternative use in research and development elsewhere.

In a recent article written by Henry Gold, chief of the Accounting

Research Department established by Shell two years ago, he states inter alia, that the three areas of particular concern to Shell are currency translation, deferred taxation, and inflation accounting.

Taxation. I now, therefore, turn to the treatment of taxation in general and deferred taxation in particular. Subject to normal arrangements under double taxation treaties or statutes granting tax relief, taxation is levied on the companies in the areas in which they are resident and to a large extent passed through to the holding companies.

The 1978 group tax was £1,863 m., that is, 66 percent of the income before tax associated companies' share of earnings and income applicable to minority interests (£2,807). In 1979 (final details not yet available), the figures were £2,591, that is, 51 percent of income of £5,083. The reduction in the percentage would suggest a large element of stock relief.

A note on the 1978 accounts states that the Inland Revenue is currently inquiring into interaffiliated pricing by oil companies operating in the United Kingdom. The taxing authorities do so under a section in the Income and Corporation Tax Act of 1970 which states that where buyer and seller are under the same control, technically referred to as connected persons, the Inland Revenue may substitute market price for the transfer price if there is the opinion that prices have been kept down to reduce the profits subject to U.K. taxation and this can be proved. In the judgment of the directors, no material effect in relation to the group financial position is likely to arise.

Deferred taxation. This matter, we are confidentially assured, will cause the auditors of Shell Transport, formerly Turquands (First President) Barton Mayhew & Co., now Ernst and Whinney, as well as the other two auditors of the group, Klynveld Kraayenhof & Co. of The Hague and Price Waterhouse of New York, to qualify their report. The reason for the qualification is attributed to the differences between the U. K. and U.S. standards.

SSAP 15 states that U.K. companies should make a provision to the extent that it is likely to become payable. The United States, as you are all no doubt aware, adopts a much more conventional historic cost approach, thus showing the maximum liability for deferred tax.

Deferred tax, mainly the result of stock relief and capital callousness of 100 percent on new plant, a danger of the British method, is apparent at a time of recession when stocks decline and a company's unrestricted

program stops. It could be faced with heavy tax bills, but the chances are that legislation would be enacted to alleviate the impact. Already because the steel strike has resulted in stocks being depleted, the chancellor of the exchequer announced in his budget speech that provision would be made to defer for one year any tax effects of this enforced stock depletion.

Price Waterhouse made a comparison of methods used in sixty-four countries. Only the United Kingdom, Eire, and Mexico adopted SSAP 15. Eight countries, including the United States, permitted it, three (including the Netherlands) would not accept it, and among the remaining fifty, it was seldom used. Shell opted to conform to the standard of the home country of Royal Dutch and also to that of the United States where a large part of the group's activities take place and also because Shell U.K. has a quotation on Wall Street. The auditors point out that to conform to U.K. requirements, the figures should have been restricted to the parent company to conform with the U.K. deferred tax standard. Shell directors felt that this would be misleading since it would distort the ratio of the two parents. Henry Gold stated that it would be nice if the United States, the United Kingdom, and Holland could harmonize this standard among themselves. International standards had no authority to intervene (to be discussed later).

Returning to 1978 accounts — deferred taxation at year end was £1,088 for the group, approximately the same figure as the profit after tax for the year. This figure is after deducting £380 million for the United Kingdom Advance Corporation Tax (ACT) which is recoverable against future corporation tax payments. The charge for this year was £290. It would appear that the bulk of this was due to the fact that expenditure on fixed assets greatly exceeded the depreciation charge for the year.

ACT AND DIVIDENDS

Advance corporation tax which is payable at the dividend as a tax credit is equivalent to income tax at the standard rate and subsequently allowed against mainstream corporation tax. It is referred to as imputation system of taxation. In 1978, the tax credit was calculated at 33/67 of the dividend paid. Arrangement for the 60/40 distribution between Shell and Royal Dutch also provides that the burden of all

taxes shall fall in the same proportion. The imputation tax credit is a benefit to the group, so accordingly it has been agreed that for the years 1977-84, Shell U.K. shall be entitled to 15 percent of the cash amount paid to Shell as a special dividend.

Accordingly, the net income for 1978 is divided between the parent companies as follows:

	Total	Royal Dutch	Shell
Distribution 60/40	587	352	235
Less tax credit	77		77
	510	352	158
Adjustment for earlier years	3		3
Supplementary cash dividend	24		24
Net distributions to parent companies	537	352	185
Undistributed net income	549	330	219
Group earnings after tax	1,086	682	404

Because of limitation of dividends in the United Kingdom up to May/June 1979, the entitlements of Shell for 1976, 1977, and 1978 have been postponed and to compensate, Shell U.K. also received a special dividend of 6.4 again postponed, making the total postponed dividends at 31 December 1979 £ 2,865 million.

ASSOCIATED COMPANIES

SSAP 1 in the United Kingdom defines an associated company as one where the investing company has more than 20 percent of issued capital and can exercise reasonable control over its management (similar, I think, in the United States). Shell states that investments of the group in significant associated companies in which the interest is 50 percent or less are stated at the amount of the group's share of the net assets of the companies concerned. Results for 1978 are as follows:

	£
Oil and natural gas	432
Chemicals	73
Coal and metals	70
Other	20
	£599

The statement of income includes the group's share of earnings after tax less appropriate provisions.

For 1978, the figures were these:

	£
Share of earnings	643
Less currency-translation losses	62
	581
Less taxation	274
	£307.

There are also a few oil production joint ventures in Brunei and Nigeria where the group's share of crude production enters the group oil supply stream as purchases and is deducted from purchased oil while the group's share of taxation is included in taxation on income for 1978.

Earnings were	811
Profit on exchange	6
Less taxation	691
	£126

The minority interest includes £103 million in respect of a private placement by Shell Canada of 10 million floating rate preferred shares aggregating $250 Canadian, redeemable at any time by the company or by the shareholders in 1989. Long-term debt at 31 December 1979 amounted to £3,062 of which £210 was due for repayment during 1979 shown as a current liability leaving £2,852 as long-term debt in the balance sheet.

Sources of loans were as follows:

	1979	Rate of interest
U.S.A. dollars	1,566	7.8
Dutch guilders	316	8.2
French francs	359	8.2
£ sterling	40	7.1
Swiss francs	263	6.7
German marks	209	6.6
Other currencies	309	7.0
Total and average rate	£3,062	7.6.

It is interesting to observe the large earnings from the United States compared with the very low figure from the United Kingdom. The rates of interest are very low by current standards.

EFFECTS OF INFLATION

Summary statements are produced on pages 52 and 53 of the annual report to allow for the effects. As expected, the principal matters dealt with are depreciation charge and inventory, or cost of sales adjustments. All figures are expressed in terms of pounds at 31 December 1978 using the U.K. retail price index as follows: £1 sterling at 31 December 1978 was equivalent to £0.92 at 1-1-78; 0.82 at 1-1-77; 0.71 at 1-1-76; 0.57 at 1-1-75; and 0.48 at 1-1-74.

One interesting fact which emerges is that profits for 1978 as adjusted for effects of inflation amount to only £480, about 40 percent of the historical figure of £1,086. Return on capital employed was 14.1 percent for 1978 but as adjusted for inflation, only 3.3 percent, while earlier years as adjusted were 6.1 percent for 1977; 5.8 percent for 1976; 2.2 percent for 1975; and 10.7 percent for 1974.

Long-term debt and capitalized lease as a percentage of total capital employed was 26.2 percent in 1978 but as adjusted for inflation, 16.3 percent. Other years adjusted for inflation were 1977, 16.5; 1976, 17.8; 1975, 16.4; and 1974, 15.2.

As no doubt often happens to many of us when reviewing a paper, we wish it were better. I certainly wish that I were able to disclose more of the technical problems involved in consolidation, but when I had an interview with Henry Gold, he kindly showed me the manual of instruction for consolidation purposes and that very largely consisted purely of different codes for different items of expenditure and income. However, I trust that most of these observations have proven interesting.

I conclude with the final sections of the financial review.

The effects of inflation on accounts

In the absence of an accounting standard which not only has international acceptance but can also be satisfactorily applied to assets and operations specific to the oil extractive industry, supplementary financial statements are again provided restating the historical sterling amounts in pounds of current purchasing power. . . . These figures go some way towards eliminating the distorting effects of inflation on the historical figures.

On this basis, the adjusted figure for 1978 net income is £480 million and the rate of return on average net assets 3·3%. The adjusted ratio of long-term debt, including capitalized lease obligations, to total capital employed is 16·3%.

In the United States, the Securities and Exchange Commission requires certain replacement cost data to be filed. This requirement is being followed but it is not believed that the information is sufficiently objective and comprehensive to merit inclusion in this Report.

Accounting standards

During 1978 there were a number of major external developments affecting the future of financial reporting. The Group took full advantage of the consultation processes which the various national and international accounting bodies provide by participating in discussions and presenting submissions on the major issues involved. A typical example concerned the subject of foreign exchange translation under FAS 8, on which discussions were held with the Financial Accounting Standards Board and the Securities and Exchange Commission and where it now appears as if some change in United States practice may be forthcoming.

In formulating the approach to these new developments, attention has primarily to be paid to the need to provide Group financial information in a manner acceptable to its users throughout the world. It has always been the aim to use a synthesis of accepted practices in at least the Netherlands, the United Kingdom and the United States to this end. It is paradoxical that the adoption of new accounting standards, designed to narrow differences in accounting treatment within national boundaries, should actually increase differences internationally. This is now happening and may grow worse. Investigation seems essential into the fundamentals of financial reporting such as its objectives and qualities, the definitions of the elements of financial statements and methods of measurement. At present, inadequate search for international accord is being undertaken in these areas. More detailed agreement on accounting standards is likely to be achieved if these basic questions can be settled. This is a field in which the International Accounting Standards Committee could perhaps be expected to take a lead.

If financial reporting is to be preserved as an impartial and therefore reliable form of communication, it seems essential that the professional bodies, in consultation with the parties involved, should continue to have responsibility for formulating accounting standards; it is to be hoped that these bodies will move with some urgency to achieve much closer international co-operation than exists at present. Anything less than true harmonization of accounting standards, where the underlying circumstances are similar world-wide, will not be in the best interests of the very many users of the financial statements of the Group, nor indeed of multinational groups generally.[2]

As previously stated, the timing of this seminar means that some of the sentiments expressed here have been overtaken by events in the field of greater international cooperation, certainly between the United States and the United Kingdom, but I felt to attempt to update the quotation would detract from its quality and effectiveness and considered therefore that it was better to continue with the article which after all expressed the views on 1978 and early 1979 of a group which, if not the largest multinational outside the United States, is certainly among the largest.

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[2] Shell Annual Report, pp. 35-36.

The Predictive Ability of Financial Ratios Using Alternative Translation Methods for Foreign-Currency Financial Statements: A Simulation Study

YAW M. MENSAH and LOUIS F. BIAGIONI*

Since the Financial Accounting Standards Board issued Statement of Financial Accounting Standards (SFAS) No. 8 which requires the use of the "temporal" method as the method for translating financial statements of foreign subsidiaries, there has been mixed reaction by the financial community. The current study, through the use of a simulation model, attempts to measure the impact that different translation methods have upon some "key" financial ratios. The assumption that these financial ratios are considered by the financial community to be relevant measures of a company's financial health and may be useful to the prediction of business failures prompts this investigation. Based upon several studies, such as the works of Beaver and of Elam in testing the ability of financial ratios to predict business failure, the current study examines whether different translation methods provide significant differences in financial ratios, which in turn result in different predictions of business failures.[1]

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[1] William H. Beaver, "Financial Ratios as Predictors of Failure," *Empirical Research in Accounting: Selected Studies,* 1966, *Journal of Accounting Research,* Supplement (1967): 71-111; and Rick Elam, "The Effect of Lease Data on the Predictive Ability of Financial Ratios," *Accounting Review* (January 1975): 25-43.

Prior to SFAS No. 8, multinational firms were permitted to use different accounting methods to handle foreign-currency translations.[2] Since the issuance of SFAS No. 8, there has been considerable disagreement by the financial community to the exclusive use of the temporal method of translation and the concomitant requirement that foreign-currency adjustments be disclosed in the current year's income statement. Prior to SFAS No. 8, multinational firms were permitted to defer such foreign-currency adjustments rather than report them directly in the current year's income statement.

An objection expressed against SFAS No. 8 has been that the pronouncement has often led management to take economic actions relative to foreign-currency positions which result in unfavorable economic consequences. That is, management in its quest to show "favorable" accounting results has made economic decisions which are, in essence, dysfunctional to the financial position of the firm. These are the allegations which are made by various segments of the financial community. The body of "evidence" presented to support this thesis, however, has been mostly anecdotical.[3] Such allegations must still be proven empirically.

Another argument that has been levied against SFAS No. 8 is the contention that the new pronouncement may lead to different financial statement numbers and, as a result, the market may react differently to these "different accounting numbers." Theoretically, one might argue that the use of one translation method over another method is a mere accounting change and that no "real" economic change has taken place with the multinational entity. A change in the manner of accounting for an event should not change the event itself. And furthermore, the use of different accounting methods does not fool the securities markets' evaluation of companies using different accounting methods. There is a whole body of literature which supports this proposition.[4] Specifically, a study conducted by Shank et al. addressed the issue of whether there was a difference in market evaluation of

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[2] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 8* (Stamford, Conn.: FASB, 1975).

[3] "Foreign Woes: Foreign Exchange Losses Are Proving Costly for Many Multinationals," *Forbes Magazine* (1 December 1976); "New Accounting Rule Makes Multinationals Alter Their Strategies," *Wall Street Journal* (8 December 1976); and "How Colgate Attempts to Avert Large Losses in Foreign Currencies," *Wall Street Journal* (22 May 1978).

[4] For a fairly good review of the efficient market hypothesis literature, see Eugene F. Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work," *Journal of Finance* (May 1970): 383-417.

companies before and after SFAS No. 8. In this study, the authors compared firms affected by SFAS No. 8 and firms not affected by SFAS No. 8. The Shank et al. study concluded that although there was no significant difference in market reaction to SFAS No. 8 firms versus non-SFAS No. 8 firms, multinational companies as a whole suffered a negative market reaction during the periods examined (1970 to 1977).[5] One might question why there would be a negative differential market reaction to multinational companies as compared to domestic companies. According to the Shank study, the difference was apparently due to concerns over such factors as floating exchange rates, volatile foreign inflation rates, taxation of foreign-source earnings, and widespread political instability rather than by accounting considerations.[6]

PURPOSE OF THE STUDY

The current study is not directly concerned with the impact of SFAS No. 8 on management actions, although this is considered a very important issue, nor are we specifically interested in replicating empirical studies of the market's reaction to the implementation of SFAS No. 8. Rather, the current study attempts to investigate whether, under a certain set of assumptions or conditions, different translation methods will result in significantly different measures of financial ratios which ratios can then be used to distinguish between "successful" and "nonsuccessful" foreign subsidiaries.

This study will be conducted through the use of a simulation model. The reason for selecting the simulation approach to examine the research question is predicated on the assumption that we could better control the variables which we wished to examine. The study of empirical data generally leaves some doubt that factors other than the ones examined may be influencing results. The use of simulation overcomes this possible deficiency. On the other hand, the assumptions and variables used in constructing the simulation model are *critical,* and any weakness in these assumptions or variables, of course, weakens the study.

The current study is fashioned somewhat after a study conducted by Elam who examined the impact that capitalization of leases had on

[5] John K. Shank, Jesse F. Dillard, and Richard J. Murdock, "Assessing the Economic Impact of FASB No. 8" (New York: Financial Executives Research Foundation, 1979).
[6] Ibid., p. 90.

the predictive ability of financial ratios.[7] The similarity of the Elam study to the current study is that both are involved in evaluating the use of financial ratios as predictors of business failures. The dissimilarities are fourfold: (1) Elam was investigating different accounting treatments of leases, while the present study is interested in different translation methods for multinational companies; (2) Elam's study was an empirical examination of company financial data, but this study utilizes a simulation model; (3) Elam selected twenty-eight financial ratios to be tested; the authors eliminated Elam's last ratio because the simulation model does not include preferred stock in its financial structure;[8] and (4) Elam's study identified business failure as bankruptcy, while this study defines business failure in a manner not restricted to the formal act of bankruptcy.

The twenty-seven ratios used in the current simulation study are listed in exhibit 1.[9]

THE SIMULATION MODEL

The study employs three companies (Companies A, B, and C) in 125 industries. All three companies in each industry are identical in the initial period. The industries are homogeneous with respect to output and input, but heterogeneous with respect to all other factors. The initial balance sheet for each industry was generated from balance-sheet ratios for the 25 basic industries (two-digit SIC code level) presented in the 1979 *Dow Jones — Irwin Business Almanac*. The total assets of each of the companies in the simulation were initially set at 1 million dollars. A representative balance sheet is presented in exhibit 2.

For the simulation model to generate some of the twenty-seven ratios presented in exhibit 2, it was necessary to introduce two additional parameters: (1) an inventory turnover ratio, and (2) the number of days of sales outstanding. These parameters were selected to permit the simulation model to differentiate better among industries, and to establish a relationship between the stochastic sales level and two key balance-sheet items: inventories and accounts receivable. The

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[7] Elam, "Predictive Ability."

[8] The financial ratio from Elam's study which was omitted in the current study was the ratio of "current plus long-term liabilities plus preferred stock to total assets."

[9] Elam, "Predictive Ability," p. 26.

Exhibit 1. Financial Ratios

Short-term liquidity ratios
1. Cash to current liabilities
2. Current assets to current liabilities
3. Current assets minus inventories to current liabilities

Cash-flow ratios
4. Cash flow to sales
5. Cash flow to total assets
6. Cash flow to net worth
7. Cash flow to total liabilities

Long-term solvency ratios
8. Net worth to total liabilities
9. Net worth to long-term liabilities
10. Net worth to fixed assets
11. Net operating profit to interest

Short-term capital productivity ratios
12. Sales to inventory
13. Sales to accounts receivable
14. Sales to working capital
15. Sales to current assets minus inventories
16. Sales to cash

Profit-margin ratios
17. Net operating profit to sales
18. Net profits to sales

Long-term capital productivity ratios
19. Sales to fixed assets
20. Sales to total assets
21. Sales to net worth

Return-on-investment ratios
22. Net income to net worth
23. Net operating profit to total assets
24. Net operating profit to total debt

Debt coverage ratios
25. Current liabilities to total assets
26. Long-term liabilities to current assets
27. Current plus long-term liabilities to total assets

values of the parameters were selected from the 1977 *Dun and Bradstreet Key Business Ratios for 125 Industries.*[10]

Companies A, B, and C are assumed to be wholly-owned foreign subsidiaries of domestic companies. The only investments made by the

[10] The ratios selected from Dun and Bradstreet's *Key Ratios for 125 Industries* were intended to lend external validity to the results of the simulation.

Exhibit 2. Representative Initial Balance Sheet Used in Simulation

	Dow Jones–Irwin Almanac Percentage	
Assets		
Cash	15	$ 150,000
Accounts receivable	13	130,000
Finished goods inventories	18	180,000
Fixed assets	54	540,000
TOTAL ASSETS	100	$1,000,000
Equities		
Accounts payable	10	100,000
Short-term loans	10	100,000
Bonds payable	20	200,000
Owner's equity	60	600,000
TOTAL EQUITIES	100	$1,000,000

domestic companies in these foreign subsidiaries are represented by the capital stock of the respective companies. These foreign subsidiaries are assumed to be semiautonomous, with relative freedom to obtain all necessary funds (either short term or long term) in the countries in which they operate. The only restriction relates to equity capital. The subsidiaries' initial equity base can be increased only from retained earnings; no further capital contributions are made to the foreign subsidiaries by the domestic parent companies.

The companies are differentiated by the fact that Company A is run by management with superior forecasting ability and operating efficiency, Companies B and C by management with poor forecasting ability and operating efficiency. Company B's management always underpredicts potential sales in a rising demand situation and overpredicts in a declining demand situation. Company C's management commits forecasting errors of the exact opposite. The variable operating costs of Companies B and C are uniformly 8 percent above Company A's costs.

The Economic Environment

General and specific price-level indices were generated for the foreign country and general price-level indices for the domestic country. In the simulation, it was assumed that the foreign country is experiencing

a higher level of inflation than the domestic country. Inflation rates, measured by the general price-level index, varied stochastically from 0 percent to 15 percent for the foreign country, and from 0 percent to 10 percent for the domestic country. Specific price levels for the foreign country were generated based on an assumption of a possible stochastic deviation of up to 30 percent (in either direction) from the general price levels.

Nominal short-term interest rates were then generated for the domestic country such that they were systematically related to the general inflation rates in the domestic country[11]

$$\mathrm{SRA}(t) = 9.00 + 0.9e^{\mathrm{GPL}(t)/\mathrm{GPL}(t-1)} \tag{1}$$

where

SRA(t) = Short-term interest rate in domestic country at time t
GPL(t) = General price level in domestic country at time t.

The exchange rates were also generated from a model based on the generally supported relative purchasing-power parity theory.[12]

The specific model used was as follows:

$$\mathrm{ER}(t) = \left[\left(\frac{\mathrm{GPLB}(t)}{\mathrm{GPLB}(t-1)} * \mathrm{ER}(t-1) * \frac{\mathrm{GPLA}(t-1)}{\mathrm{GPLA}(t)}\right)\right] * \tilde{T} \tag{2}$$

where

GPLB(t) = General price-level index of foreign country at time t
GPLA(t) = General price-level of domestic country at time t
ER = Exchange rate expressed as a number of foreign-currency units that one unit of the domestic currency can buy
$\tilde{T}$ = Random drift term varying from .85 to 1.17.

The nominal short-term interest rates in the foreign country were

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[11] The initial value of the nominal short-term interest rate was set arbitrarily at 9 percent. The subsequent movement of the interest rate was related to the movement of the general price-level index. For empirical support for this general model, see, for example, J. W. Elliott, "Measuring the Expected Real Rate of Interest: An Exploration of Macroeconomic Alternatives," *American Economic Review* (June 1977): 429-44.

[12] The version of the relative purchasing-power parity (PPP) theory adopted here was found by Aliber and Stickney to have been generally applicable in the period 1961-71 with a deviation of up to 15 percent. See Robert Z. Aliber and Clyde P. Stickney, "Accounting Measures of Foreign Exchange Exposure: The Long and Short of It," *Accounting Review* (January 1975): 44-57. For an exhaustive survey of the empirical literature examining the long-term validity of the relative PPP theory, see Steven W. Kolhagen, *The Behavior of Foreign Exchange Markets: A Critical Survey of the Empirical Literature,* Monograph Series in Finance and Economics (1978-3) (New York University, 1978).

next generated such that the departures from the interest-rate parity theory would be within plus or minus 12 percent.[13] The specific expression (with an imposed upper and lower limit restriction of 5 percent to 20 percent) is this:

$$\mathrm{SRB}(t) = \left[\left(\frac{\mathrm{ER}(t+1)}{\mathrm{ER}(t)} * (1 + \mathrm{SRA}(t)\right) - 1\right] * \tilde{\mathrm{T}} \qquad (3)$$

where

SRB = The nominal short-term interest rate in the foreign country
$\tilde{\mathrm{T}}$ = A random drift term varying from .88 to 1.12.

Nominal long-term interest rates were generated for both the foreign and domestic countries under the assumption that there is a stochastic premium of long-term interest rates over short-term rates ranging from 1 percent to 4 percent.[14]

The Operating Environment

The demand function used in the simulation model assumes a single product. The function is generated as follows:

$$\mathrm{D}(jt) = e^{\mathrm{SP}(jt)/\tilde{\mathrm{PE}}(j)} + 1{,}000e^{\tilde{\mathrm{IND}}(j)} + e^{\tilde{\mathrm{ECON}}(t)} \qquad (4)$$

where

D(jt) = The demand function facing industry j at time t
SP(jt) = The selling price of industry j's output at time t
$\tilde{\mathrm{PE}}(j)$ = A stochastic price elasticity factor for industry j
$\tilde{\mathrm{IND}}(j)$ = A stochastic industry trend factor for industry j
$\tilde{\mathrm{ECON}}(t)$ = A stochastic general economic trend factor facing all industries at time t in the foreign country.

The values of the parameters of the demand function were so generated that the maximum demand possible is 60,000 units of the product. The maximum capacity of each plant is set at 10,000 units so that the maximum number of plants necessary to meet the demand is six.

The companies in each industry were required to make the following decisions in the sequence outlined in exhibit 3. The minimum

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[13] Empirical support for the parameters and the values used here for the Fisher Interest Rate Parity (IRPT) theory can be found in Aliber and Stickney, "Accounting Measures," and Kolhagen, *Foreign Exchange Markets.*

[14] Empirical support for the observation that long-term interest rates often have a premium over short-term rates may be found in Thomas F. Wilson, "The Responsiveness of Bond Yields to Variations in Short-term Interest Rates," *Business Economics* (September 1978): 28-31.

cash balance is 1 percent of the next period's projected sales. There is no penalty, however, for failing to maintain this minimum balance. Raw material purchases are assumed to be made in quantities just sufficient to cover the production requirements. Material prices are assumed to increase at the specific price-level rate. Labor and all other expenses increase at the general inflation rate.

Exhibit 3. Sequence of Activities

Beginning of period t	— Projection of sales for next eleven years.
	— Projection of production requirements taking into account (i) the present capacity, (ii) the projected sales demand for the current period, (iii) the finished goods inventory available at the beginning of the period, and (iv) the desired ending finished goods inventory.
During period t	— Production and sales. Errors in forecast of sales result in excessive inventory of finished goods or shortages. Excessive inventory results in extra holding costs. Shortages result in lost sales from potential as determined by the demand function.
End of period t	— Income statement and balance sheet prepared in foreign currency.
	— If cash deficit, short-term financing resorted to in the following order: (a) Short-term bank loans available up to 80 percent of the market value of inventories at short-term interest rates; (b) Factoring of up to 80 percent of accounts receivables at 2 percent above short-term rates; (c) Forced liquidation of up to 75 percent of normal inventories at 5 percent above cost.
	— Dividends/royalties declared and paid.
	— Investment decision using net present value analysis and based on sales forecasts. Plants can be built one at a time and made available the next period.
	— Long-term financing decision. Bonds outstanding may be refinanced at current long-term interest rates in foreign country and/or new ones issued to finance new plant and increased working capital requirements. Limit is 80 percent of the net realizable value of net fixed assets. Net realizable value is calculated as 85 percent of the current replacement cost of plant. (Plant values change at specific price-level rates.)

Repair and maintenance costs on plant and equipment increase at an exponential rate related to the age of the plant. Plant life was ten periods, and depreciation is on a straight-line basis. Material costs constitute 25 percent of the variable costs of each company, and variable selling and administrative expenses constitute another 25 percent. The other 50 percent of variable costs is made up of labor and variable overhead costs. Fixed manufacturing overhead (excluding depreciation and maintenance costs) and fixed selling and administrative expenses are generated as:

$$FFOH = 234{,}612 * e^{0.4(PL)} * GPLB(t) \tag{5}$$

$$FSA = 117{,}306 * e^{0.4(PL)} * GPLB(t) \tag{6}$$

where

PL = Number of plants owned by a company
GPLB(t) = General price level at time t in foreign country.

This cost function would generate the inverted *S* shape of the conventional microeconomic theory of the firm if the general and specific price-level effects are ignored.

Selling prices for the product are set by the industry and are assumed to increase at one-half of the specific price-level rate. The initial prices were derived from the parameters initially entered into the model in such a way that the return on total assets of the Dun & Bradstreet 125 basic industries was realized in the initial period.

Relationship with Domestic Parent Companies

To minimize the impact of economic conditions in the domestic country or the operations of the parent companies on the foreign subsidiary's results, it was assumed that the foreign subsidiaries are autonomous operating units, with freedom to purchase their inputs from any source. They also had complete freedom with regard to cash management, investment, and financing decisions except for the following:

1. They could not issue capital stock beyond the initial investments made by the parent companies.
2. Dividends/royalties were required to be paid in each period equal to 4 percent (a risk premium) above the domestic long-term interest rates on the initial investment. These dividends were to increase exponentially at a rate of 15 percent per period. The subsidiaries also incurred the foreign-exchange risks.

As a result, in their capital investment decisions, the subsidiaries must use a cost of capital calculation that incorporates the changing exchange rates. The subsidiaries are assumed to use the book value method in calculating the cost of capital.

Definition of Business Failure

Business failure is defined as the inability to meet the requirement to pay the dividends without either (1) running into a cash deficit situation with no additional sources of debt available to meet the payment; or (2) running into a negative equity situation because of insufficient retained earnings to cover the required dividend/royalty payments.

Translation Methods

The translation methods evaluated in this study are the following:

Symbol	Interpretation
CUNNOC	Current-noncurrent method
TEMPMD	Temporal method
CURRAT	All-current rate method
TRADEX	Translation-index method

The CUNNOC method is widely used in many countries and was used in the United States until SFAS No. 8 superseded it. The version implemented here ignores the traditional distinction between realized and unrealized exchange gains and losses. Under this traditional approach, realization was assumed to occur when dividends are remitted. As explained by Choi & Mueller,

> Realized gains or losses on foreign exchange conversion and/or translation are taken directly to current results of operations. Unrealized losses are also charged against current operations, but unrealized gains are to be carried to a suspense account. To the extent that unrealized gains offset prior provisions for unrealized losses, the former are credited to the account previously charged.[15]

It has been persuasively argued by Hepworth[16] that the distinction between realized and unrealized exchange gains and losses was mean-

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[15] See Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 65-74.
[16] Samuel R. Hepworth, *Reporting Foreign Operations* (Ann Arbor: University of Michigan, 1956).

ingless. Realization of the exchange gain or loss fails to occur only on the remittance of dividends. It occurs also when assets are converted from money-value form to nonmoney-value form, that is, the acquisition of inventories or long-lived assets. The viewpoint taken in this study, therefore, was either to charge all the translation gains or losses to current operations, or to adjust the equity section directly.

The TEMPMD method is the implementation of the translation rules advocated by SFAS No. 8. The monetary-nonmonetary method was ignored in the study since it yields practically the same results as the temporal method when the historical cost valuation model is used, as in this study.

The CURRAT method is used widely around the world in countries such as Britain and Japan. The TRADEX method is based on a recommendation by George M. Scott who has argued that the entire exercise is meaningless and an indexation approach might represent the best procedure.[17] In this study, the TRADEX index used is the exchange rate as predicted by the relative purchasing-power parity (PPP) theory, that is, ignoring the random deviations from the PPP theory.

STATISTICAL ANALYSIS

Since the objective of the study was to see which of the translation methods yielded financial ratios which distinguished between the failing and nonfailing firms as well as the financial ratios of the basic untranslated foreign-currency statements (BASIC), the first procedure was to study the predictive ability of the BASIC financial statements.

For each industry, companies which satisfied the conditions of "failure" were identified. The other company(ies) were identified as successful. The financial ratios of the BASIC statements of these companies were then analyzed to see how well they were able to distinguish between the successful companies and the failed companies. Multiple discriminant analyses were performed for the periods five years before failure to the period of failure. The test of the external validity of the simulation model was whether these tests yielded results conformable to those found by other researchers using empirical

[17] George M. Scott, "FASB 8, The Foreign Currency Translation Index and Bounded Horizons." Paper presented at the Northeast Regional Meetings of the American Accounting Association, 1979.

data.[18] Next, similar tests were conducted for the financial ratios of domestic currency statements yielded by each of the four translation methods. These tests were performed using all of the twenty-seven ratios initially identified.

STATISTICAL RESULTS

The results of the simulation are summarized in exhibit 4. In 9 of the 125 industries, all three companies failed. In another forty, both Groups B and C companies failed. Group C companies failed alone in 36 industries, and Group B companies in 40 industries.

Exhibit 4. Distribution of Failing Companies in 125 Industries

Group B companies failed alone	40
Group C companies failed alone	36
Groups B and C companies both failed	40
All companies failed	9
TOTAL	125

In exhibit 5, the distribution of the number of companies used to develop the discriminant function coefficients is presented as "grouped" companies. All 80 Group B companies which failed were included in the group of failed companies. Only the 36 Group C companies which failed alone in each industry were included in this category. In other words, in the subsample used to develop the discriminant coefficients, 80 Group B companies and 36 Group C companies comprised the group of companies classified as "failed." This resulted in a total of 116 "failed" companies to be compared to 116 Group A "nonfailed" companies.[19]

A test of the predictive power of a discriminant function is provided by the use of a holdout sample, in which a proportion of the available sample of observations is initially classified as "ungrouped." The

[18] See, for example, Elam, "Predictive Ability," and Beaver, "Predictors of Failure."

[19] This particular categorization could have resulted in a bias of the discriminant functions, although the direction of the bias is indeterminate. To ascertain this, all Group C companies which failed were reclassified as ungrouped. The predictive power of the discriminant functions was unaffected by this reclassification.

Exhibit 5. Distribution of Companies in Discriminant Analyses

Grouped		*No. of Co.*	*Percentage*
Successful companies (Group A nonfailed)		116	50
Failed companies (Groups B and C only)		116	50
		232	100
Ungrouped (Holdout sample)			
Nonfailed (B & C companies)			
Group B companies	36		
Group C companies	40		
TOTAL		76	53
Group C companies failed but ungrouped	40		
Other failed companies (in 9 industries)	27	67	47
TOTAL		143	100

discriminant function coefficients are developed on the basis of the subsample classified as "grouped." The predictive power of the function can then be tested by examining how well the function is able to classify correctly the ungrouped subsample. The holdout sample on which the predictive ability of the various translation methods were tested consisted of seventy-six nonfailed companies of Groups B and C, and sixty-seven failed companies (including twenty-seven companies in the nine industries in which all companies failed).

The predictive ability of the discriminant models was examined by how well the models were able to identify correctly the ungrouped companies as either "failed" or "nonfailed." Misclassification may occur in one of two ways: (1) a failed company may be incorrectly classified as nonfailed, or (2) a nonfailed company may be incorrectly classified as failed.

The test statistic used here made no distinctions between the two types of error. The specific test statistic used was the "T" statistic, defined as[20]

$$T = \frac{N(O_{11}\,O_{22} - O_{12}\,O_{21})^2}{n_1 n_2\,(O_{11} + O_{21})\,(O_{12} + O_{22})}$$

The notation is defined in the contingency table in exhibit 6.

[20] See Elam, "Predictive Ability," for a more complete description of the T-statistic.

Exhibit 6. Two-by-Two Contingency Table

	Correctly classified	Incorrectly classified
Basic	Number of firms correctly classified O_{11}	Number of firms incorrectly classified O_{12}
Translation method	Number of firms correctly classified O_{21}	Number of firms incorrectly classified O_{22}

$n_1 = O_{11} + O_{12}$.
$n_2 = O_{21} + O_{22}$.
$N = n_1 + n_2$.

The T-statistic is distributed as a chi-square with one degree of freedom. Thus, to test the successive null hypothesis that the predictive ability of the financial ratios generated by the different translation methods are not significantly different from that of ratios based on the untranslated (BASIC) financial statements, five contingency tables were formed (one for each possible pairing) for the successive periods from the year of failure to five years before failure. The computed T-statistic was then compared to the critical chi-square values at different levels of significance (specifically at 1, 2.5, 5, and 12.5 percent).

The results of the discriminant analyses are summarized in exhibit 7. The percentage of companies correctly classified was calculated as:

$$P = 1 - \frac{W_1 + W_2}{N}$$

where

P = Percentage of companies correctly classified
W_1 = Number of companies wrongly classified as failed
W_2 = Number of companies wrongly classified as nonfailed
N = The total number of companies in the grouped (or ungrouped) category.

Exhibit 7. Results of Six Discriminant Models Percentage of Companies Correctly Classified

	Translation gains and losses included in income		*Translation gains and losses excluded from income*	
Years before failure/method	Grouped %	Ungrouped %	Grouped %	Ungrouped %
A. Year = 0				
BASIC	94.3	85.9	94.3	85.9
CUNNOC	93.9	72.5	93.9	72.5
TEMPMD	94.3	72.5	93.9	72.5
CURRAT	94.8	85.9	94.8	85.2
TRADEX	93.9	84.5	93.9	85.2
B. Year = 1				
BASIC	94.4	72.0	94.4	72.0
CUNNOC	93.5	73.4	94.4	76.2
TEMPMD	94.4	77.6	94.0	79.0
CURRAT	94.4	72.0	94.4	73.4
TRADEX	94.4	72.0	94.4	72.0
C. Year = 2				
BASIC	91.8	67.8	91.8	67.8
CUNNOC	90.9	63.6	91.4	63.6
TEMPMD	91.4	58.0	91.4	58.0
CURRAT	91.4	67.8	91.8	67.8
TRADEX	91.8	67.8	91.8	67.8
D. Year = 3				
BASIC	92.1	49.2	92.1	49.2
CUNNOC	92.6	47.5	91.6	49.0
TEMPMD	92.6	50.8	91.6	49.2
CURRAT	93.1	49.2	91.6	49.2
TRADEX	92.1	47.5	92.1	49.2
E. Year = 4				
BASIC	91.5	40.5	91.5	40.5
CUNNOC	92.0	40.0	90.0	38.0
TEMPMD	90.0	43.8	91.0	44.6
CURRAT	92.5	42.1	91.5	41.3
TRADEX	89.5	39.3	91.5	41.3

Exhibit 7 (cont.)

Years before failure/method	*Translation gains and losses included in income* Grouped %	Ungrouped %	*Translation gains and losses excluded from income* Grouped %	Ungrouped %
F. Year = 5				
BASIC	85.5	57.4	85.5	57.4
CUNNOC	87.0	47.1	84.5	56.2
TEMPMD	83.5	50.4	83.0	57.9
CURRAT	87.0	55.4	85.0	61.2
TRADEX	87.0	55.4	85.5	59.5

The only significant T-statistic computed was with respect to the CUNNOC and TEMPMD methods in the year of failure. Both of these translation methods yielded ratios which predicted significantly less accurately than the other translation methods or the BASIC financial statements. The computed T-statistic was significant at a level of significance of 5 percent. All the other translation methods incorrectly classified ten companies, while CUNNOC and TEMPMD incorrectly classified twenty companies. Apart from this, none of the other T-statistics computed were significant at even the 12.5 percent level of significance. The overall conclusions which may be derived from these results are that the differences between the translation methods are insignificant, at least with respect to their predictive ability.

A significant finding is that the exclusion of translation gains and losses from the reported income does not significantly impair the predictive ability of the ratios of the alternative translation methods. This finding is significant because much of the controversy surrounding SFAS No. 8 concerns the requirement to include translation gains and losses in the income statement. A comparison of the classification accuracy in exhibit 7 shows no significant differences.

Exhibits 8 through 10 present a rank ordering of the twenty-seven ratios in their relative importance in the discriminant functions. For the sake of readability, only the first fifteen ratios of statistical importance are ranked in exhibits 7 through 10.[21] In view of the conclusions

[21] The kurtosis of a distribution is the ratio of the fourth moment around the mean to the fourth power of the standard deviation. Large values occur when the distribution has long thick tails. The skewness of a distribution is the ratio of the third moment around the mean to the third power of the standard devia-

Exhibit 8. Rank Order of Financial Ratios

(Translation gains and losses included in income)

Year of failure

	Ratios	*BASIC*	*CUNNOC*	*TEMPMD*	*CURRAT*	*TRADEX*
Liquidity ratios	1	3	3	7	3	3
	2	5	5	3	5	5
	3	4	4	13	4	4
Cash-flow ratios	4	12	11	10	12	12
	5	15	14	14		
	6					
	7	11	10	11	11	11
Long-term solvency ratios	8		13		14	13
	9					
	10	1	1	2	1	1
	11					
Short-term capital	12					
productivity	13	14	15		15	15
	14					
	15					
	16					
Profit-margin ratios	17					
	18	7	8	8	8	7
Long-term capital	19		9	6		
productivity	20	9		12	9	9
	21	8		15	7	8
Return on investment	22	6	7	4	6	6
	23	10	12	9	10	10
	24	2	2	1	2	2
Debt-coverage ratios	25					
	26	13	6	5	13	14
	27					
Canonical correlation		0.82	0.80	0.81	0.82	0.82
Wilk's Lambda		0.33	0.36	0.34	0.33	0.33

drawn from exhibit 7, one can conclude that the only effect of the various translation methods is to change the rank ordering of different ratios in distinguishing among the foreign subsidiaries.

tion. It is used as a measure of the degree of nonsymmetry of a distribution. See Henri Theil, *Principles of Econometrics* (New York: John Wiley & Sons, 1971), pp. 62-63.

Exhibit 9. Results of Discriminant Analysis

(Rank order of ratios based on standardized discriminant coefficient weights)
Model for two years before failure

	Ratios	*BASIC*	*CUNNOC*	*TEMPMD*	*CURRAT*	*TRADEX*
Liquidity ratios	1	5	8	8	5	7
	2	9	6	11	9	9
	3	2	4	12	2	2
Cash-flow ratios	4					
	5	4	2	3	3	4
	6		12			15
	7	8	8	5	8	8
Long-term solvency ratios	8	6	7		7	6
	9					
	10	3	5	10	6	5
	11					
Short-term capital productivity ratios	12					
	13		13	13		
	14		15	15	15	
	15	13	14	7	14	14
	16					
Profit margin	17					
	18					
Long-term capital productivity	19	12	13	14	13	12
	20	14	9		11	11
	21	15				
Return on investment	22			9		
	23	11	10	4	10	13
	24	1	1	1	1	1
Debt-coverage ratios	25	10	11	6	12	10
	26	7	3	2	4	3
	27					
Canonical correlation		.816	0.81	0.80	0.81	0.81
Wilk's Lambda		.333	0.34	0.36	0.34	0.34

Exhibit 10. Results of Discriminant Tests

(Rank order of ratios based on standardized discriminant function coefficients)

Five years before failure

	Ratios	*BASIC*	*CUNNOC*	*TEMPMD*	*CURRAT*	*TRADEX*
Liquidity ratios	1	13	9	7	10	9
	2	4	10	5	11	10
	3	16	4	3	5	5
Cash-flow ratios	4				12	14
	5	6	3	14	3	3
	6	12	12		9	11
	7	11	11		8	8
Long-term solvency ratios	8	7	7		6	6
	9					
	10	5	5	10	4	4
	11					
Short-term capital productivity	12					
	13					
	14					
	15			15		
	16					
Profit-margin ratios	17					
	18	15	15	8	15	
Long-term capital productivity	19	10	8	6	13	12
	20	14	14	12		13
	21	8		13		
Return on investment	22	3	6	4	7	7
	23	9	13	11	14	15
	24	1	1	1	1	1
Debt-coverage ratios	25			9		
	26	2	2	2	2	2
	27					
Canonical correlation		0.71	0.69	0.68	0.70	0.70
Wilk's Lambda		0.50	0.52	0.53	0.51	0.51

In exhibit 11, a rank ordering of the fifteen most heavily weighted ratios is reported for the discriminant model in the year of failure for the case where translation gains/losses were excluded from reported income. Again, it is easily observed that all that has occurred there, relative to the results reported in exhibit 8 where the translation gains/

losses were included in reported income, is a change in the relative importance of some ratios. As a whole, however, within the limits of this simulation, none of the translation methods result in a superior prediction of failure/nonfailure of foreign subsidiaries, regardless of whether translation gains/losses are included in income or not.

Exhibit 11. Results of Discriminant Analysis

(Rank order of ratios based on standardized discriminant coefficient weights)

Year of failure

	Ratios	*BASIC*	*CUNNOC*	*TEMPMD*	*CURRAT*	*TRADEX*
Liquidity ratios	1	3	3	6	3	3
	2	5	5	5	5	5
	3	4	4	11	4	4
Cash-flow ratios	4	12	12	10	12	12
	5	15		14		
	6					
	7	11	11	12	11	11
Long-term solvency ratios	8		13		14	13
	9					
	10	1	2	2	1	1
	11					
Short-term capital productivity ratios	12					
	13	14	14		15	15
	14					
	15					
	16					
Profit-margin ratios	17					
	18	7	8	9	7	7
Long-term capital productivity ratios	19		9	7		
	20	9		13	9	9
	21	8	15		8	8
Return-on-investment ratios	22	6	7	3	6	6
	23	10	10	8	10	10
	24	2	1	1	2	2
Debt-coverage ratios	25					
	26	13	6	4	13	14
	27			15		
Canonical correlation		0.82	0.80	0.81	0.81	0.82
Wilk's Lambda		0.33	0.36	0.34	0.33	0.33

LIMITATIONS OF THE STUDY

The classification techniques of discriminant analysis are based on the assumption that the predictor variables (in this study, the financial ratios) have a multivariate normal distribution. This assumption was specifically examined in the study. The skewness and the kurtosis of the individual ratios were examined for the different discriminant models. The observed measures ranged widely, with an extreme observation of a kurtosis measure of 276.2 and skewness measure of 16.23; this compares to the normal distribution measures of 3 (for the kurtosis) and 0 (for skewness). It seems fair to conclude that the normality assumption was violated to varying degrees in the study. The effect of such violations impacts largely on a higher error rate in the calculation of the probabilities of group membership. Precise evidence on the permissible limits of departures from normality in this context is lacking. However, available evidence indicates that some parametric tests such as the t-test are fairly robust with respect to violations of the normality assumption.[22]

A second statistical problem in the study concerned multicollinearity among sets of the predictor variables. Indeed, the correlation matrix showed correlation coefficients exceeding 80 percent among some sets of the financial ratios. Since discriminant analysis in the two-group case can be regarded as an extension of multiple regression, the existence of such high multicollinearity would ordinarily be a cause for concern. This problem was dealt with in this study by using a stepwise procedure in which only those variables which, when combined with ratios already in the model, significantly increased the multiple F-ratio.[23]

A third statistical problem was the requirement of equality of the

[22] On the general robustness of some parametric statistics to violations of the normality assumption, see M. G. Kendall and A. Stuart, *The Advanced Theory of Statistics,* vol. 2 (New York: Hafner Publishing Company, 1967). See also G. E. P. Box and G. S. Watson, "Robustness to Non-normality in Regression Tests," *Biometrica* (v. 59): 93-106, and cited in Theil, *Econometrics,* pp. 615-16.

[23] The criterion used was the minimization of Wilk's Lambda. In extreme cases, multicollinearity would prevent the inversion of the matrix of predictor variables. This problem can, however, be avoided by using the generalized eigenvalue form of the discriminant model. See Maurice M. Tatsuoka, *Multivariate Analysis: Techniques for Educational and Psychological Research* (New York: John Wiley & Sons, 1971). The highest correlations (from 70-92 percent) were observed among the following sets: ratios 1 through 3 and 8; ratios 7 and 5; ratios 19 and 24; ratios 20 and 21; and ratios 22, 24, and 26. All of them, incidentally, figured prominently in the discriminant functions.

covariance matrices of the two groups. This problem was dealt with indirectly by using the pooled within-groups covariance matrix, instead of the covariance matrices of the individual groups.

The statistical problems identified here are not necessarily unique to this study. It has been investigated and handled in other studies using multivariate models of financial ratios. In a study of the ability of financial ratios to predict small business failures using discriminant analysis, Troy E. Daniel attempted to deal with the multicollinearity problem by using factor analysis to derive principal components from among the ratios finally used in his study.[24] In a study to determine the usefulness of financial ratios to common stock investors, O'Connor used correlation analysis to reduce his original thirty-three ratios to ten.[25] Altman used trial-and-error techniques in addition to other diverse statistical methods to select the five ratios ultimately used in his discriminant function to predict bankruptcy.[26]

Consideration was given to all of these approaches in the current study to reduce the multicollinearity among the ratios. These approaches were rejected primarily because the impact of translation was likely to have varying effects on the different ratios, and the elimination of a subset of these ratios could have jeopardized the predictive ability of different translation methods.

Consideration was also given to a transformation of the ratios. This would probably have eliminated the statistical problems of non-normality and the lack of equality of the variance-covariance matrices mentioned earlier. The approach was rejected because, even if the results provided a more accurate prediction, such transformations are unlikely to occur in practice by users of financial statements attempting to distinguish between different companies on the basis of financial ratios.

In final defense of the procedures adopted in this study, a comparison of the results reported here with other studies using empirical data is appropriate. Altman reported that, using his discriminant functions, he could predict bankruptcy with 95 percent accuracy in the first year before failure, 72 percent accuracy in the second year, and less than 50 percent accuracy in the third through fifth years prior to failure. The authors' discriminant functions (for the BASIC financial ratios)

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[24] Troy E. Daniel, "Discriminant Analysis for the Prediction of Small Business Failure" (Ph.D. Dissertation, University of Alabama, 1968).

[25] Melvin C. O'Connor, "On the Usefulness of Financial Ratios to Investors in Common Stock," *Accounting Review* (April 1973): 339-52.

[26] Edward I. Altman, *Corporate Bankruptcy in America* (Lexington, Mass.: Heath, 1971), chap. 3.

has an 85.9 percent accuracy in the year of failure, 67.8 percent in the second year, and 57.4 percent in the fifth year.[27] Allowing for differences in the definitions of failure, the authors' simulated results would appear to have considerable external validity. This is even more clearly demonstrated when the importance of some financial ratios as identified by the present simulation model is compared to others reported in studies using empirical data. Beaver's study identified the most powerful predictive ratios as (1) cash flow to total debt (ratio 7 in the authors' list); (2) net income to total assets (ratio 23); (3) total debt to total assets (ratio 27); (4) working capital to total assets (excluded from the present model); and (5) the current ratio (ratio 2).[28] The rank ordering of the individual ratios presented in exhibits 8 through 10 includes three of these ratios (ratios 2, 7, and 23) among the top fifteen.

It should be noted that, while exchange gains and losses can be true economic gains and losses from the perspective of a multinational company as a whole, the translation gains and losses covered here are only a subset of the entire exchange gains and losses. The assumptions embodied in this simulation ensured that the translation gains and losses reported were exclusively the result of the accounting translation method used. The conclusions drawn from this study relate, therefore, only to translation gains and losses.

A further limitation of this study are the assumptions that (1) the foreign subsidiaries all operated in the same foreign country; and (2) the maximum difference in inflation rates between the foreign and domestic countries was 5 percent. The results reported here could very well differ significantly if the simulation model allowed a much wider difference in the respective inflation rates of the two countries. A similar possibility exists if the approach adopted here were applied to an analysis of the consolidated balance sheet of multinational corporations with subsidiaries in several different countries (with different inflation and exchange-rate fluctuations).

SUMMARY AND CONCLUSIONS

This study has attempted to evaluate the predictive ability of alternative translation methods. The analysis was conducted by examining the predictive ability of financial ratios based on the various translation methods vis-à-vis the financial ratios of untranslated financial

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[27] Ibid.

[28] Beaver, "Predictors of Failure," pp. 71-111.

statements. The findings support the contention that no translation method yields significantly superior results.

Despite the controversy over the requirement in SFAS No. 8 that translation gains/losses be included in reported income, their inclusion or omission does not significantly impact on the predictive ability of the alternative translation methods.

An immediate implication of these findings, if sustained in further research, is that SFAS No. 8, to the extent that it induces management to take economic actions in pursuit of accounting results, is poor public policy since it may result in the misallocation of economic resources. It appears to the authors that the selection of a particular accounting method by the FASB should, in some way, enhance the usefulness of financial information to users. If SFAS No. 8 does not add to the predictive ability of alternative translation methods and further research does not uncover any other benefits, and furthermore if it may have the undesirable consequence of inducing dysfunctional behavior in management, then a revision of the accounting treatment is warranted.

Indicated further research in this area might extend in one of three directions: (1) the present research effort can be extended to greater extremes regarding the magnitude of possible exchange-rate fluctuations; (2) the approach can be extended to cover the situation in which foreign subsidiaries exist in more than one country; or (3) the simulation approach can be extended to examine the impact of different valuation models (such as replacement cost, and so on) on the relative predictive ability of the translation methods. The monetary-nonmonetary method will differ significantly from the temporal method when valuation models other than the historical cost model are used. To the extent that accounting is a continuously developing science, the state of knowledge must be regarded as an unbounded horizon to which research, both empirical and theoretical, can be fruitfully applied.

An Approach to "Environmentalizing" Multinational Enterprise Performance Evaluation Systems

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The growth of multinational enterprises (MNEs) has necessitated a corresponding development of proper financial control systems to manage these complex organizations. However, performance evaluation measures which are one of the critical elements of a financial control system have not been developed to the extent required for the proper evaluation and control of multinational enterprise managers. Although there have been numerous articles and studies highlighting the problems encountered in the adoption of traditional performance evaluation measures by the MNE,[1] relatively little conceptual or theoretical research developing solutions to these problems has been carried out. The importance of solving these problems was noted by the 1974

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[1] John J. Mauriel, "Evaluation and Control of Overseas Operations," *Management Accounting* (March 1969): 36-37; J. M. McInnes, "Financial Control Systems for Multinational Operations: An Empirical Investigation," *Journal of International Business Studies* (Fall 1971): 12; Edward C. Bursk et al., *Financial Control of Multinational Operations* (New York: Financial Executives Research Association, 1971), p. 25; Sidney M. Robbins and Robert B. Stobaugh, "The Bent Measuring Stick for Foreign Subsidiaries," *Harvard Business Review* (September-October 1973): 85; and Helen Gernon Morsicato, "An Investigation of the Interaction of Financial Statement Translation and Multinational Performance Evaluation" (Ph.D. Dissertation, The Pennsylvania State University, 1978).

American Accounting Association Committee on International Accounting which stated:

> The special circumstances surrounding the operations of MNEs introduce elements into traditional performance evaluation techniques, frequently accounting based, that require modification of these techniques. Further investigation of various evaluation methods potentially available to MNEs in these special circumstances would be a major, but useful undertaking.[2]

The purpose of this paper is to explore the problems which evolve when multinational enterprises attempt to adopt traditional managerial performance evaluation measures in various operating environments. More specifically, this paper integrates the Farmer-Richman Model into the development of performance evaluation standards for the managers of MNEs. The result of this integration makes it possible to systematically incorporate environmental factors into the evaluation of managerial performance.

The first section provides a summary of the results of a current research study that reports the types of performance measures used by MNEs [for example, return on investment (ROI), residual income, budgets, and so on]. The second section discusses the need for incorporating environmental factors peculiar to an operating environment into any of the performance measures currently used. The documentation of this need includes both a theoretical discussion and a presentation of empirical results from the aforementioned study. The final section begins with a description of the Farmer-Richman Model and is followed by a discussion of how this model can be used to systematically incorporate environmental factors into the evaluation of managerial performance.

PERFORMANCE EVALUATION MEASURES CURRENTLY IN USE

Morsicato examined the use of U.S.-dollar and local-currency information by international division executives (IDEs) in evaluating the internal performance of their foreign managers.[3] Seventy U.S.-based MNEs with subsidiaries operating abroad participated in the first phase of this field study by completing a mailed questionnaire. Thirty-three of these participants were involved in the second phase consisting of personal interviews.

[2] Committee on International Accounting, "Report of the Committee on International Accounting," *Accounting Review,* supplement to vol. XLIX (1974): 257.

[3] Morsicato, "Multinational Performance Evaluation."

The questionnaire yielded the information necessary to document the financial measures currently used by MNEs to evaluate the performance of subsidiary managers. Exhibit 1 lists the percentages of the sample corporations which use the particular evaluation measure. Many corporations reported the use of multiple measures.

Exhibit 1. Financial Measures Used as Indicators of Internal Performance Evaluation

Percent[a]	*Financial measures*
81.4	Profit
80.0	Return on investment (assets)
78.6	Budget compared to actual profits
72.9	Budget compared to actual sales
65.7	Cash-flow potential from foreign subsidiary to U.S. operations
48.6	Return on equity
45.7	Budget compared to actual return on investment
34.3	Ratios
21.4	Residual income
12.9	Others

[a] These figures represent the percent of the total seventy corporations which report using each particular measure.

The Morsicato results are consistent with the results of prior studies. Mauriel found that the fifteen participating MNEs employed budgeting, financial planning, comparisons, the profit center concept emphasizing ROI, and sales and profit targets.[4] McInnes reported that the corporations studied mentioned ROI, actual compared to budgeted performance, and historical comparisons as the three most useful financial control techniques used in evaluating performance.[5] In 1971, the Financial Executives Research Foundation found the most important indicator of an operation's performance to be profit as compared to a profit budget with ROI mentioned second.[6] Robbins and Stobaugh reported that the basic measure of performance was a form of ROI with budgets used for supplemental information.[7]

[4] Mauriel, "Evaluation and Control."
[5] McInnes, "Financial Control Systems."
[6] Bursk et al., *Financial Control.*
[7] Robbins and Stobaugh, "Bent Measuring Stick."

IMPACT OF ENVIRONMENT ON A SYSTEM OF PERFORMANCE EVALUATION

Irrespective of which performance evaluation measure a MNE uses, the financial results which a subsidiary manager reports to headquarters will be affected by the characteristics of the local operating environment. The performance evaluation system should reflect this circumstance.

Groups of Environmental Influences

The environmental influences on a system of performance evaluation may generally be categorized into one of three groups:

1. Those items which can be quantified in monetary terms. These items should be incorporated and considered when the performance evaluation system for foreign operations is designed. This group includes considerations related to the use of different currencies, the devaluation of currencies, changes in the price level, and the multiplicity of tax practices found overseas.
2. Those items which are related to operating and financial risk. These items should be incorporated into the desired performance standards. This group of risk considerations includes exchange controls, the risk of expropriation, political instability, various government regulations, and import-export controls.
3. Those that influence the effectiveness of a performance evaluation system's administration. These are behavioral considerations and reflect the different personal value systems, cultural backgrounds, and educational levels of the nationals in the overseas management hierarchy.[8]

The first group deals with problems encountered in accounting measures, such as whether these measures should be utilized before or after translating the financial information to U.S. dollars. Although these variables are important, this paper focuses upon the second and third groups.[9]

Both the second and third groups of environmental variables relate to behavioral factors which are difficult to integrate into the performance evaluation system. Generally, these are variables over which a foreign subsidiary manager has little or no control. It is therefore important to isolate these factors and determine how they affect mana-

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[8] Bursk et al., *Financial Control.*

[9] See Helen Gernon Morsicato and Lee H. Radebaugh, "Internal Performance Evaluation of Multinational Enterprise Operations," *International Journal of Accounting* (Fall 1979), for a discussion of accounting measurement problems.

gerial performance. Failure to do so may have dysfunctional consequences if managers perceive their evaluations to be based upon factors they cannot control, or if they feel that proper allowances are not made for these factors.

Results of the Corporations' Behavior toward Operating Environment

One of the purposes of the Morsicato study was to determine whether there is a relationship between the foreign operating environment of a subsidiary and the measures used by a corporation to evaluate that subsidiary's performance. This aspect of the study focused on whether or not a corporation's system of internal performance evaluation is designed to reflect environmental differences (for example, cultural, legal, political, and economic). Whether a firm modifies the performance evaluation system in accordance with changes which have occurred in a specific environment was also investigated.

Exhibit 2 is a percentage tabulation of the IDE's responses to whether or not environmental factors are included in the design of the corporation's system of internal performance evaluation. The actual percentages represent the corporation's policy toward including environmental factors, which may be peculiar to one geographic area, within the design of the performance evaluation system. The preferred percentages represent the opinion of the IDE as to whether he or she believes that a performance evaluation system should reflect environmental differences.

Exhibit 2. Actual vs. Preferred Inclusion of Environmental Factors in a Performance Evaluation System

	Not at all 1 %	2 %	*Moderately* 3 %	4 %	*To a great extent* 5 %
Actual[a]	20.0	38.6	25.7	11.4	4.3
Preferred[b]	10.0	25.7	35.7	20.0	8.6

[a] Actual represents the corporation's policy toward including environmental differences within the design of the performance evaluation systems.
[b] Preferred represents the opinion of the IDE as to whether he believes that a performance evaluation system should reflect environmental differences.

Forty-one IDEs (58.6 percent) reported that their corporation's evaluation systems have been designed to include environmental differences less than moderately. However, forty-five (64.3 percent) re-

ported that they believe a system of internal performance evaluation should at least moderately reflect environmental peculiarities.

Several IDEs mentioned one or more specific environmental differences which have been considered by their corporations. Language is one of the cultural factors mentioned. The economic variables included the following: tax structures, inflation rates, growth rates, availability of leverage, cost factors, labor rates, wage and price controls, and currency fluctuations. Political stability and risk, combined with the degree of governmental interference, are mentioned frequently.

Many executives stated that these variables are incorporated into the preparation of the budget; therefore, environmental differences are considered in performance evaluation. Others felt that if the evaluations are calculated using local currency, then these environmental factors are naturally considered. This is questionable unless the standards for acceptable performance are determined by including factors peculiar to the environment.

Twenty-three IDEs (33.0 percent) responded that their systems of internal performance evaluation have been modified during the last ten years because of changes which have occurred in a specific environment. These changes included currency fluctuations; inflation; issuance of FASB No. 8; and general cultural, legal, political, and economic changes. The modifications included a change in emphasis from U.S.-dollar information to local-currency information; more use of budgets; incorporation of local-currency comparisons; incorporation of environmental changes into the budgets; changes in rates used for translation; an addition of supplemental information to basic evaluation techniques; and the use of subjective evaluations of managers and subsidiaries.

Foreign-currency fluctuation is an example of an important environmental variable which many firms feel has required modifications in their performance evaluation systems. Exhibit 3 presents the executives' responses when asked whether during the past ten years a significant change in the strength of a foreign currency has caused the corporations to react by instituting a change in policy. Seven corporations (10.0 percent) reported that currency fluctuations have caused them to change the required standard of performance for either a manager or subsidiary in a particular environment. Fifteen corporations (21.4 percent) reported that they have actually changed the measure used for evaluation. This finding corresponds to the comments

made previously on modifications of performance evaluation systems. Twenty-one corporations (30.0 percent) had changed their emphasis from U.S.-dollar to local-currency information, while twelve (17.1 percent) had made the opposite change. The corporations that now place increased emphasis upon U.S.-dollar information reported doing so because of the increase in currency volatility. The responses indicated that using information which has been translated into dollars provides a consistent evaluation basis worldwide.

Exhibit 3. Corporations' Reactions to a Significant Change in the Strength of a Foreign Currency

Yes (Percent[a])	*No (Percent)*	*Does not apply (Percent)*	*Corporations' reactions*
10.0	70.0	20.0	Change the *standard* of *internal* performance evaluation used in regard to the subsidiary and the manager operating in that environment (i.e., acceptance of an 8% ROI rather than the 12% standard).
21.4	64.3	11.4	Change the financial measure used to *internally* evaluate the performance of the subsidiary and the manager operating in that environment (i.e., emphasis is transferred from ROI to the budget).
30.0	52.9	15.7	Change the emphasis of *internal* performance evaluation from U.S.-dollar statements to local-currency statements.
17.1	57.1	22.9	Change the emphasis of *internal* performance evaluation from local-currency statements to U.S.-dollar statements.

[a] These figures represent the percent of the total seventy corporations which report making a particular change.

Performance Evaluation Philosophies

The results of the Morsicato study indicated that, in general, the firms are not systematically designing performance evaluation systems that recognize environmental differences. In general, two philosophies

of performance evaluation were identified from the overall responses of the IDEs. The first is an inflexible philosophy with established policies which should be used worldwide without exception. The second is a flexible philosophy established by subjectively considering the important elements of each geographic area which may change as conditions change. Corporations are practicing both philosophies and incorporating combinations of the two into their operations.

Comments from interviews with IDEs helped explain this finding. For example, several of the IDEs felt that the peculiarities of the different operating environments should be ignored when evaluating foreign operations. Their comments included the following: "Our systems are purposefully designed not to consider environmental differences, because the financial information must be comparable across all subsidiaries"; "We do not understand the different local-currency financial information, and therefore, do not build environmental factors into the performance evaluation system"; "Company policy does not allow considering environmental differences when evaluating performance"; "We are not that sophisticated yet"; "Our performance evaluation system is designed to be standard worldwide and not to reflect environmental differences"; "The environment was built into the original system, and the system does not change to reflect changes in the environment"; and "The subsidiary manager may voice his opinion as to the environment and how it will affect him, but this carries little weight."

Many of the IDEs questioned believed that environmental differences are considered without necessarily being systematically incorporated into the formal performance evaluation system. Comments reflecting this conclusion were as follows: "Our managers build the environment into their budgets"; "We build the environment in by allowing subjective analysis"; "We take currency into account by using budgeted exchange rates"; "We control for the environment by placing people in countries who can cope with the local problems"; "We have switched to U.S. dollars so that we can better understand what is happening to our subsidiary's operations"; "Environmental differences are considered in the short-run; however, overall company profitability is the most important consideration in the long-run"; and "Fluctuating currencies have caused the entire company to sit up, and the impact has been on the whole corporation rather than on the individual subsidiary manager."

A few corporations originally designed flexible performance evalu-

ation systems to cope with environmental fluctuations and/or formally changed these systems due to fluctuations. Examples of such behavior follow: "Our corporation has always been local-currency oriented so we built in the environment from the beginning"; "We have become local-currency oriented because of fluctuating currencies and other environmental peculiarities"; "Environmental differences are reflected in various ROIs, therefore we accept various ROIs"; "Our standards change as the environment changes"; "We have had to change our acceptable standard for ROI due to environmental changes, and we have switched our emphasis to local currency to limit the volatility of our earnings"; and "We have changed our standards by now accepting a lower profit in the budgets."

The corporations exhibited a variety of behavior toward specific geographic differences, problems, and peculiarities. No patterns in this behavior were evident from the data collected. Coping with the environment appears to be almost firm specific; therefore, it was difficult to generalize and/or report results based upon the corporations' behavior as a group.

These results indicated that MNEs perceive the need to incorporate environmental peculiarities into their control systems. However, at this time, no feasible method of accomplishing this task has been developed. The next section of this paper addresses this issue.

INCORPORATION OF ENVIRONMENTAL PECULIARITIES INTO PERFORMANCE EVALUATION SYSTEMS

The basis for establishing performance standards is understanding the relationships among environmental constraints, managerial performance, and budget members. Farmer and Richman have developed a model that analyzes these relationships and can be adopted by MNEs in trying to develop performance standards.[10] This model which is briefly described here is the focus of the final section of the paper. Included is a possible example of its application.

The Farmer-Richman Model

The Farmer-Richman model relates external environmental constraints to internal firm functions and ultimately management and managerial effectiveness.[11] These relationships are outlined in exhibit 4.

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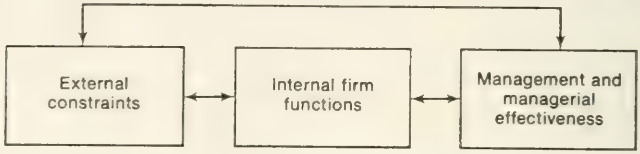
[10] Richard N. Farmer and Barry M. Richman, *International Business,* 2nd ed. (Bloomington, Ind.: Cedarwood Press, 1974).

[11] Ibid., and idem., *Comparative Management and Economic Progress,* rev. ed. (Bloomington, Ind.: Cedarwood Press, 1970), for a detailed analysis of this model.

Exhibit 4. Effects of External Constaints on Internal Firm Functions



In discussing the model, Farmer and Richman noted,

> The basic idea presented here is that if the environment is different, firms will be operated and managed differently, with this leading to different efficiency results between similar firms in different environments.[12]

Obviously, the same could be said about subsidiaries of corporations operating in different environments.

Appendices 1 and 2 list the critical elements in the management process and the external constraints which affect these processes. Finally, Appendix 3 is a matrix developed by Farmer and Richman which illustrates the hypothesized relationships between environmental constraints and management processes.

The Use of the Model

Farmer and Richman suggest a number of uses for their methodology that range from measuring system-wide efficiency to evaluating local constraints. For our purposes, this methodology provides a useful framework for establishing efficiency measures and thus performance standards which systematically include the effect of environmental differences. The use of this model is described below.

In a very general sense, the Farmer-Richman model could be used to rate the relative environments of different countries. A subsidiary manager responsible for a division in a country with a higher overall environmental rating would be expected to obtain a higher level of performance than managers operating in environments with lower ratings. For example, Farmer and Richman suggest that the Delphi technique could be used to develop ideal weights for each environmental constraint. The same technique could also be used to weight the same constraints in various countries. The differences between ideal and actual represent the degree of environmental difficulty with which the manager must cope.

[12] Farmer and Richman, *International Business,* p. 83.

However, there are a number of difficulties with this approach. First, the task of quantification using the Delphi technique to rate all constraints is expensive and time consuming. Second, this approach ignores the interrelationship between environmental constraints and specific firm functions. Thus, it becomes impossible to quantify the effects of various environmental constraints on performance measures.

A more efficient approach would be for a corporation to determine which particular management functions are most critical to the operating performance of a subsidiary. As Farmer and Richman note, each corporation or subsidiary operating in various environments will most likely find that different management functions are the most critical. For example, a corporation may determine that production and procurement (B_7) and finance (B_9) are the most important management functions for the successful operation of a subsidiary located in Peru. For a different subsidiary located in West Germany, marketing may be the critical management process.

The next step in the process would be to develop efficiency measures for the various management functions. For example, Farmer and Richman note that in evaluating the production function in a corporation, output per man hour could be used. They list a number of such efficiency measures and note that a number of firm specific measures could be developed.[13]

After the critical firm managerial functions and the related efficiency measures for these functions are developed, the corporation should identify from the matrix in Appendix 3 which environmental constraints affect these management processes. As noted before, a consensus process such as the Delphi technique could be used to rate these environmental constraints. The corporation could thus focus attention on determining the numerical effect of those environmental constraints on the efficiency of various management functions. Thus, over a period of time, a statistical relationship could be determined between managerial efficiency and the level of the environmental constraints. This would suggest a performance standard for critical management processes that systematically include environmental constraints.

Clearly, there are a number of implementation problems with this approach. First, it will take a substantial amount of empirical work to quantify the relationship between environmental constraints and

[13] Farmer and Richman, *Comparative Management,* p. 71.

managerial efficiency measures. Second, the resulting managerial performance standards are disaggregate in nature. Aggregating these measures into standards for residual income, return-on-investment or profit budgets is a difficult task. However, the Farmer-Richman model makes explicit a number of relationships which would allow a corporation to analyze at least qualitatively the effect of environmental variables on projected managerial performance. Once these relationships are established, empirical work can begin on determining quantitative relationships.

SUMMARY

This paper has focused on the need to develop managerial performance evaluation systems that include environmental variables. The empirical research results presented indicate that although IDEs perceive the importance of environmental constraints, these constraints are not presently being systematically incorporated into evaluation systems. The Farmer-Richman model provides a framework that will allow MNEs to develop performance evaluation systems that include the effect of environmental variables.

APPENDIX 1. CRITICAL ELEMENTS OF THE MANAGEMENT PROCESS[1]

B_1: Planning and Innovation

1.1 Basic organizational objectives pursued and the form of their operational expression.
1.2 Types of plans utilized.
1.3 Time horizon of plans and planning.
1.4 Degree and extent to which enterprise operations are spelled out in plans (i.e., preprogrammed).
1.5 Flexibility of plans.
1.6 Methodologies, techniques, and tools used in planning and decision making.
1.7 Extent and effectiveness of employee participation in planning.
1.8 Managerial behavior in the planning process.
1.9 Degree and extent of information distortion in planning.
1.10 Degree and extent to which scientific method is effectively applied by enterprise personnel — both managers and nonmanagers — in dealing with causation and futurity problems.
1.11 Nature, extent, and rate of innovation and risk-taking in enterprise operations over a given period of time.
1.12 Ease or difficulty of introducing changes and innovations in enterprise operations.

B_2: Control

2.1 Types of strategic performance and control standards used in different areas; e.g., production, marketing, finance, personnel.
2.2 Types of control techniques used.
2.3 Nature and structure of information feedback systems used for control purposes.
2.4 Timing and procedures for corrective action.
2.5 Degree of looseness or tightness of control over personnel.
2.6 Extent and nature of unintended effects resulting from the overall control system employed.
2.7 Effectiveness of the control system in compelling events to conform to plans.

B_3: Organization

3.1 Size of representative enterprise and its major subunits.
3.2 Degree of centralization or decentralization of authority.
3.3 Degree of work specialization (division of labor).
3.4 Spans of control.
3.5 Basic departmentation and grouping of activities. Extent and uses of service departments.
3.6 Extent and uses of staff generalists and specialists.
3.7 Extent and uses of functional authority.
3.8 Extent and degree of organizational confusion and friction regarding authority and responsibility relationships.
3.9 Extent and uses of committee and group decision making.
3.10 Nature, extent, and uses of the informal organization.

3.11 Degree and extent to which the organization structure (i.e., the formal organization) is mechanical or flexible with regard to causing and/or adapting to changing conditions.

B_4: Staffing

4.1 Methods used in recruiting personnel.
4.2 Criteria used in selecting and promoting personnel.
4.3 Techniques and criteria used in appraising personnel.
4.4 Nature and uses of job descriptions.
4.5 Levels of compensation.
4.6 Nature, extent, and time absorbed in enterprise training programs and activities.
4.7 Extent of informal individual development.
4.8 Policies and procedures regarding the layoff and dismissal of personnel.
4.9 Ease or difficulty in dismissing personnel no longer required or desired.
4.10 Ease or difficulty of obtaining and maintaining personnel of all types with desired skills and abilities.

B_5: Direction, Leadership, and Motivation

5.1 Degree and extent of authoritarian vs. participative management. (This relates to autocratic vs. consultative direction.)
5.2 Techniques and methods used for motivating managerial personnel.
5.3 Techniques and methods used for motivating nonmanagerial personnel.
5.4 Supervisory techniques used.
5.5 Communication structure and techniques.
5.6 Degree and extent to which communication is ineffective among personnel of all types.
5.7 Ease or difficulty of motivating personnel to perform efficiently, and to improve their performance and abilities over time (irrespective of the types of incentives that may be utilized for this purpose).
5.8 Degree and extent of identification that exists between the interests and objectives of individuals, work groups, departments, and the enterprise as a whole.
5.9 Degree and extent of trust and cooperation or distrust and conflict among personnel of all types.
5.10 Degree and extent of frustration, absenteeism, and turnover among personnel.
5.11 Degree and extent of wasteful time and effort resulting from restrictive work practices, unproductive bargaining, conflicts, etc.

B_6: Marketing (Policies Pursued)

6.1 Product line (degree of diversification as specialization, rate of change, product quality).
6.2 Channels of distribution and types and location of customers.

6.3 Pricing (for key items, in relation to costs, profit margins, quantity and trade discount structure).
6.4 Sales promotion and key sales appeals (types used and degree of aggressiveness in sales promotion).

B_7: *Production and Procurement*

7.1 Make or buy (components, supplies, facilities, services, extent to which subcontracting is used, etc.).
7.2 Number, types, and locations of major suppliers.
7.3 Timing of procurement of major supplies.
7.4 Average inventory levels (major supplies, goods in process, completed output).
7.5 Minimum, maximum, and average size of production runs.
7.6 Degree to which production operations are stabilized.
7.7 Combination of factor inputs used in major products produced.
7.8 Basic production processes used.
7.9 Extent of automation and mechanization in enterprise operations.

B_8: *Research and Development*

8.1 Nature and extent of R & D activity (e.g., product development and improvement, new material usages, new production processes and technology).

B_9: *Finance*

9.1 Types of financing (e.g., equity, debt, short term, long term).
9.2 Sources of capital.
9.3 Major uses of capital.
9.4 Protection of capital.
9.5 Distribution of earnings.

B_{10}: *Public and External Relations* (The relationships, attitudes, and policies of enterprise management regarding major types of external agents and organizations.)

10.1 Customers and consumer relations (e.g.: Does firm management regard consumer loyalty and satisfaction as being important, or is it chiefly interested in short run results, quick profits?).
10.2 Supplier relations.
10.3 Investor and creditor relations.
10.4 Union relations.
10.5 Government relations.
10.6 Community relations (e.g., educational institutions, chamber of commerce, business and professional associations, community welfare activities).

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[1] Adapted from Richard Farmer and Barry Richman, *International Business,* 2nd ed. (Bloomington, Ind.: Cedarwood Press, 1974), pp. 68-71.

APPENDIX 2. ENVIRONMENTAL CONSTRAINTS[1]

C_1: Educational Characteristics

1.1 Literacy level: The percentage of the total population and those presently employed in industry who can read, write, and do simple arithmetic calculations, and the average years of schooling of adults.

1.2 Specialized vocational and technical training and general secondary education: Extent, types, and quality of education and training of this kind not directly under the control or direction of industrial enterprises. The type, quantity, and quality of persons obtaining such education or training and the proportion of those with such education and training employed in industry.

1.3 Higher education: The percentage of the total population and those employed in industry with post–high-school education plus the types and quality of such education. The types of persons obtaining higher education.

1.4 Special management development programs: The extent and quality of management development programs which are not run internally by productive enterprises and which are aimed at improving the skills and abilities of managers and potential managers. The quantity and quality of managers and potential managers of different types and levels attending or having completed such programs.

1.5 Attitude toward education: The general or dominant cultural attitudes toward education and the acquisition of knowledge, in terms of its presumed desirability. The general attitude toward different types of education.

1.6 Education match with requirements: The extent and degree to which the types of formal education and training available in a given country fit the needs of productive enterprises on all levels of skill and achievement. This is essentially a summary category; depending on the type of job involved, different educational constraints indicated above would be more important.

C_2: Sociological Characteristics

2.1 View toward industrial managers and management: The general or dominant social attitude toward industrial and business managers of all sorts, and the way that such managers tend to view their managerial jobs.

2.2 View toward authority and subordinates: The general or dominant cultural attitude toward authority and persons in subordinate positions, and the way that industrial managers tend to view their authority and their subordinates.

2.3 Interorganizational cooperation: Extent and degree to which business enterprises, government agencies, labor unions, educational institutions, and other relevant organizations cooperate with each other in ways conducive to industrial efficiency and general economic progress.

2.4 View toward achievement and work: The general or dominant

cultural attitude toward individual or collective achievement and productive work in industry.

2.5 Class structure and individual mobility: The extent of opportunities for social class and individual mobility, both vertical and horizontal, in a given country, and the means by which it can be achieved.

2.6 View toward wealth and material gain: Whether or not the acquisition of wealth from different sources is generally considered socially desirable, and the way that persons employed in industry tend to view material gain.

2.7 View toward scientific method: The general social and dominant individual attitude toward the use of rational, predictive techniques in solving various types of business, technical, economic, and social problems.

2.8 View toward risk taking: Whether or not the taking of various types of personal collective or rational risks is generally considered acceptable, as well as the dominant view toward specific types of risk taking in business and industry. The degree and extent to which risk taking tends to be a rational process in a particular country.

2.9 View toward change: The general cultural attitude toward a social change of any type which bears directly on industrial performance in a given country, and the dominant attitude among persons employed in industry toward all types of significant changes in enterprise operations.

C_3: *Political and Legal Characteristics*

3.1 Relevant legal rules of the game: Quality, efficiency, and effectiveness of the legal structure in terms of business law, labor law, tax law, and general law relevant to business. Degree of enforcement, reliability, etc.

3.2 Defense policy: Impact of defense policy on industrial enterprise in terms of trading with potential enemies, purchasing policies, strategic industry development, labor and resource competition, and similar factors.

3.3 Foreign policy: Impact of policy on industrial enterprise in terms of trading restrictions, quotas, tariffs, customs unions, foreign exchange, etc.

3.4 Political stability: Influence on industrial enterprises of revolutions, changes in regime, stability or instability over protracted periods, etc.

3.5 Political organization: Type of organization in constitutional terms; degrees of centralization or decentralization; degree and extent of red tape, delays, uncertainty, and confusion in industry-government dealings; pressure groups and their effectiveness; political parties and their philosophies; etc.

3.6 Flexibility of law and legal changes: Degree to which relevant barriers to the efficient management of industrial enterprises can be

changed and the timeliness of such changes; predictability and certainty of legal actions; etc.

C_4: Economic Characteristics

4.1 General economic framework: Including such factors as the overall economic organization of the country (i.e., capitalistic, Marxist, mixed), property rights, and similar factors.

4.2 Central banking system and monetary policy: The organization and operation of the central banking system, including the controls over commercial banks, the ability and willingness to control the money supply, the effectiveness of government policies regarding price stability, commercial bank reserves, discounting, credit controls, and similar factors.

4.3 Fiscal policy: General policies concerning government expenditures, their timing, and their impact; the general level of deficit, surplus, or balance; total share of government expenditures in gross national product.

4.4 Economic stability: The vulnerability of the economy to economic fluctuations of depression and boom, price stability, and overall economic growth stability.

4.5 Organization of capital markets: The existence of such markets as stock and bond exchanges, their honesty, effectiveness, and total impact; the size and role of commercial banking, including loan policies and availability of credit to businessmen; the existence of other capital sources such as savings and loan associations, government-sponsored credit agencies, insurance company loan activities, etc.

4.6 Factor endowment: Relative supply of capital and land (agricultural and raw materials) per capita; size and general health of the work force.

4.7 Market size: Total effective purchasing power within the country plus relevant export markets.

4.8 Social overhead capital: Availability and quality of power supplies, water, communications systems, transportation, public warehousing, physical transfer facilities, housing, etc.

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[1] Adapted from Farmer and Richman, *International Business*, pp. 80-83.

APPENDIX 3. CRITICAL MANAGERIAL ELEMENTS AND EXTERNAL CONSTRAINTS[a]

	C_1 *Educational*						C_2 *Sociological*									C_3 *Political-Legal*						C_4 *Economic*							
	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	1	2	3	4	5	6	7	8
B_1 1				x			x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2	x	x	x	x		x		x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3		x	x	x					x	x			x	x	x	x	x	x	x	x	x		x	x	x	x	x		
4		x	x	x		x		x	x	x		x	x	x	x	x	x	x	x	x	x	x			x	x			
5		x	x	x					x				x	x	x	x	x	x	x		x	x	x	x	x	x			
6		x	x	x				x		x		x	x	x	x	x	x	x			x	x				x			
7	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						x					x		
8		x	x	x	x	x	x	x		x	x	x	x	x	x														
9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x								
10	x	x	x	x	x	x		x		x	x		x	x	x														
11	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
B_2 1	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x				x			x	x			
2	x	x	x	x		x	x	x		x			x	x	x	x	x	x				x			x	x			
3	x	x	x	x		x	x	x		x			x	x	x	x						x				x			
4	x	x	x	x		x		x		x			x	x	x	x						x				x			
5	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x			x	x		x					x		
6	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x			x	x	x	x							
7	x	x	x	x		x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x			
B_3 1	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x		x	x	x	x			x						x					x		x
3	x	x	x	x		x	x	x	x	x	x	x	x			x						x					x	x	x
4	x	x	x	x		x	x	x		x	x		x														x		
5	x	x	x	x		x	x	x	x	x	x		x																x
6		x	x	x		x	x	x	x	x	x		x			x						x				x		x	x
7	x	x	x	x		x	x	x		x	x		x			x													
8	x	x	x	x	x	x	x	x		x	x		x			x				x		x							x
9		x	x	x		x	x	x		x	x		x		x														
10	x	x	x	x		x	x	x		x	x																		
11		x	x	x	x	x	x	x		x	x		x	x	x	x						x							
B_4 1	x	x	x	x	x	x	x	x		x	x	x	x			x	x										x		x
2		x		x	x	x	x	x		x	x	x	x			x											x		x
3		x	x	x	x	x	x	x		x	x	x	x			x													
4		x	x	x		x	x	x		x	x		x			x													
5							x	x		x	x	x	x			x						x			x	x	x		
6	x	x	x	x	x	x	x	x		x	x	x	x		x	x											x		
7	x	x	x	x	x	x	x	x		x	x	x		x													x		
8					x			x		x	x		x			x											x		x
9							x	x		x	x					x				x	x								
10	x	x	x	x	x	x	x	x		x	x	x	x			x	x					x	x	x	x		x		x
B_5 1	x	x	x	x			x	x		x	x																		
2		x	x	x		x	x	x		x	x	x	x			x													
3	x	x			x	x	x	x		x	x	x	x			x													
4	x	x	x	x	x	x	x	x		x	x	x	x																
5	x	x	x	x		x	x	x		x		x	x			x													

Appendix 3 (cont.)

		C_1						C_2									C_3						C_4							
		Educational						*Sociological*									*Political-Legal*						*Economic*							
		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	1	2	3	4	5	6	7	8
	6	x	x	x	x	x	x	x	x		x	x	x															x		
	7	x	x	x	x	x	x	x	x		x	x	x	x														x		
	8	x				x		x	x		x	x	x		x	x	x											x		
	9							x	x	x	x	x	x										x							
	10	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x									x		x		
	11							x	x	x	x	x	x				x				x	x	x			x		x		
B_6	1									x				x	x	x	x	x	x				x	x	x	x	x	x	x	x
	2									x				x			x	x	x				x	x	x	x	x	x	x	x
	3									x				x			x	x	x				x	x	x	x	x	x	x	x
	4	x										x	x	x	x		x						x			x			x	x
B_7	1									x				x			x	x	x				x			x	x	x	x	x
	2									x				x			x	x	x				x			x	x	x	x	x
	3									x				x				x					x			x	x		x	x
	4									x				x	x			x	x				x			x	x	x	x	x
	5									x				x	x			x	x				x			x	x	x	x	x
	6									x				x	x		x	x	x	x	x		x	x	x	x	x	x	x	x
	7	x	x	x	x		x	x	x		x	x	x	x			x	x	x				x	x	x	x	x	x	x	x
	8	x	x	x			x	x			x						x	x	x	x			x			x	x	x	x	x
	9	x	x	x			x							x			x	x	x	x			x			x	x	x	x	x
B_8	1	x	x	x	x	x	x							x	x	x		x	x	x			x			x	x	x	x	x
B_9	1												x	x	x		x			x	x		x	x	x	x	x	x	x	
	2												x	x	x		x		x	x			x	x	x	x	x	x	x	
	3							x					x	x	x	x	x	x	x				x	x	x	x	x	x	x	x
	4												x	x	x	x	x	x	x	x			x	x	x	x	x			
	5							x			x	x	x	x	x	x	x						x			x	x			
	6																													
B_{10}	1											x	x	x	x	x	x		x	x			x				x		x	
	2								x	x	x	x	x	x	x		x	x	x	x			x			x	x	x		x
	3								x	x	x	x	x	x	x	x	x		x	x			x	x	x	x	x	x		
	4	x	x	x			x	x	x	x	x	x	x	x			x		x	x	x	x	x	x	x	x		x		
	5							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							
	6	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x			x	x	x	x							

[1] Adapted from Farmer and Richman, *International Business,* pp. 90-93.

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All manuscripts submitted for consideration should be typed on 8½ x 11" paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

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[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

BIBLIOGRAPHY

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Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure — The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice Hall, 1973.

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Journal of Business Finance and Accounting

Winter 1979 Volume 6, No. 4

Editor: *J. R. Perrin*, University of Warwick, Coventry, U.K.

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THE QUARTERLY REVIEW OF ECONOMICS AND BUSINESS
Journal of the Midwest Economics Association

Vol. 20 Spring 1980 No. 1

ARTICLES

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VOLUME 16, NUMBER 2, SPRING 1981

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Volume 16 · Number 2 · Spring 1981

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The International Journal of Accounting *Education and Research* is published semi-annually, spring and fall, by the Center for International Education and Research in Accounting, College of Commerce and Business Administration, University of Illinois at Urbana-Champaign. Subscription rates are $12.00 per year. Single-copy price is $6.00. Copies of prior issues are still available.

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Contents

United Kingdom Developments in Interperiod Tax Allocation

EUGENE E. COMISKEY and ROGER E. V. GROVES*

Until quite recently, interperiod tax reporting standards in the United States and the United Kingdom had much more in common than simply the same number on their respective authoritative pronouncements — Accounting Principle Board (APB) Opinion No. 11, *Income Tax Accounting,* and Statement of Standard Accounting Practice (SSAP) No. 11, *Accounting for Deferred Taxation.* Comprehensive interperiod allocation was required in both the United States and the United Kingdom. However, SSAP No. 15, *Accounting for Deferred Taxation,* has now dramatically altered this temporary harmony.

According to SSAP No. 11, tax allocation was required for "... all material timing differences, using either the deferral method or the liability method."[1] The exposure draft (ED) which preceded SSAP No. 15, ED 19, called for use of the liability method, but the final standard was silent on the issue of the deferral versus liability methods.[2] The key change in SSAP No. 15 is no longer to require tax allocation for all timing differences. ED 19 called for the recording of deferred taxation

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[1] Statement of Standard Accounting Practice No. 11, *Accounting for Deferred Taxation* (London: Institute of Chartered Accountants in England and Wales, 1975), p. 6.

[2] Proposed Statement of Standard Accounting Practice, ED 19, *Accounting for Deferred Taxation,* par. 21.

". . . for all originating timing differences of material amount other than any tax reduction on which can be demonstrated with reasonable probability to continue for the foreseeable future."[3]

The "indefinite reversal" concept (that is, deferrals with reasonable probability of continuation for the foreseeable future) was further operationalized in SSAP No. 15:

It will be reasonable to assume that timing differences will not reverse and tax liabilities will therefore not crystallize if, but only if, the company is a going concern and:

(a) the directors are able to foresee on reasonable evidence that no liability is likely to arise as a result of reversal of timing differences for some considerable period (at least three years) ahead; and
(b) there is no indication that after this period the situation is likely to change so as to crystallize the liabilities.[4]

Application of SSAP No. 15 has resulted in many U.K. companies discontinuing the recording of deferred taxes on some or all of their timing differences; a much smaller number of companies continue application of comprehensive allocation to all originating timing differences. Where tax allocation is not applied comprehensively, the standard, importantly, calls for contingent liability disclosure of the potential amount of unrecorded deferred tax.

In essence, compared to the predecessor SSAP No. 11, SSAP No. 15 makes possible the full range of tax-allocation options from comprehensive, to partial, to no deferred taxation. Comprehensive deferred taxation remains the *general* rule; departures must be justified based upon the concept of indefinite reversal.

The balance of this article will identify the more typical U.K. timing differences and provide illustrations of how companies have dealt with them in adapting to SSAP No. 15. Finally, some thoughts will be offered on the relative merits of the current disparate positions of the accounting profession in the United States and the United Kingdom on this issue.

COMMON U.K. TIMING DIFFERENCES

SSAP No. 15 identified five main categories of timing differences:

1. Short-term timing differences from the use of the receipts and payment basis for taxation purposes and the accruals basis in financial statements: these differences normally reverse in the next accounting period;

---

[3] Ibid.

[4] Statement of Accounting Practice No. 15, *Accounting for Deferred Taxation* (London: Institute of Chartered Accountants in England and Wales), par. 28.

2. Availability of capital allowances in taxation computations which are in excess of the related depreciation charges in financial statements;
3. Availability of stock appreciation relief in taxation computations for which there is no equivalent charge in financial statements;
4. Revaluation surpluses on fixed assets for which a taxation charge does not arise until the gain is realized on disposal;
5. Surpluses on disposals of fixed assets which are subject to rollover relief.[5]

Category one requires little comment. Recording deferred taxes on these timing differences is required. Number two is analogous to the typical U.S. company's use of straight-line depreciation in shareholder reports and accelerated depreciation in the tax return. A key difference in this regard is the 100 percent first year write-offs available in the United Kingdom which magnify this particular timing difference.

Item 3, stock (inventory) appreciation relief, has no U.S. equivalent. It permits deductions in taxable profit computations for increases in stock values (inventory balance). These deductions are generally viewed as timing differences since "clawback" (recapture) of the tax saving is required if inventory values decrease in the future. Prior to SSAP No. 15, deferred taxation was recorded on these timing differences. The indefinite reversal concept in SSAP No. 15 now makes possible a permanent-difference interpretation of the stock appreciation relief deductions. Further, on July 26, 1979, the United Kingdom adopted legislation which (1) eliminates clawback (recapture) for fiscal 1973 and 1974, and (2) sets a six-year limit on recapture.

This latter provision may cause a difference previously classified as timing to be reclassified as permanent. If deferred taxation had been provided, it would then be reversed.

Many companies with U.K. operations have benefitted significantly from the combination of SSAP No. 15 and the new stock-relief legislation. Massey Ferguson Ltd., for example, recognized a $95.4 million (U.S.) tax credit on its U.K. operations for its third quarter ending July 31, 1979. This credit resulted from reversal of deferred liabilities previously booked on stock relief deductions. The $95.4 million reversal included deferred taxes from 1973 through 1978 and thus drew on both the indefinite reversal feature of SSAP No. 15 as well as the U.K. legislation making 1973 and 1974 stock relief tax deferrals permanent.

Recorded asset revaluations, item 4, create gains (or losses) whose taxability is deferred until disposition causes the gain or loss to be realized. SSAP No. 11 called for treating such items as timing differences and recording deferred taxation. However, SSAP No. 15 does not re-

[5] Ibid., par. 6.

quire the recording of the tax until "... a liability is foreseen based on the value at which the fixed asset is carried in the balance sheet. A liability would usually be foreseen (in the absence of rollover relief) at the time a company decides in principle to dispose of the asset."[6]

Rollover relief would continue the indefinite (or permanent) reversal nature of the gain on a revaluation and therefore obviate the need to record a tax charge.

Against this brief discussion of U.K. timing differences and the prior outlining of the features of SSAP No. 15, illustration of adaptations to SSAP No. 15 are now presented. These cases are provided strictly for purposes of illustration and are not suggested as representative of the broader (typical) impact of SSAP No. 15. Moreover, since SSAP No. 15 became mandatory for years starting on or after January 1, 1979, all the examples cited here represent early applications of either ED 19 or SSAP No. 15. Further, they predate the U.K. tax legislation converting 1973 and 1974 stock relief tax deferrals to permanent differences.

ILLUSTRATIONS OF THE IMPACT OF SSAP NO. 15 ADOPTION

The impact of the adoption of SSAP No. 15 can range from no departure from the comprehensive allocation of SSAP No. 11 to complete reversal of previously recorded deferred taxation and no future recording of deferred taxes on categories two through five of the common U.K. timing differences identified on page 2.

Exhibit 1 lists ten companies and the impact of adoption of SSAP

Exhibit 1. Impact of SSAP No. 15 Adoption

	*Comprehensive allocation profit as a % of reported (SSAP 15) profit**	*Deferred tax liability % of shareholder funds*		
Company		*Booked*	*Contingent*	*Total*
1. Richard Costain	100	21	1	22
2. Lead Industries Group	95	7	11	18
3. Bowthrope Holdings	90	0	15	15
4. Hoveringham Group	86	25	15	40
5. Matthew Hall and Company	82	59	13	72
6. Redman Heenan	70	0	25	25
7. John Mowlem and Company	69	9	27	36
8. Averys Limited	58	0	19	19
9. Guest Keen & Nettlefolds	33	2	26	28
10. Carpets International	17	0	32	32

* Profit is here defined as after tax but before minority interest and extraordinary items. Further, both profit and liability data exclude Advance Corporation Tax.

[6] Ibid., par. 12.

No. 15 on their 1978 profits after tax. The exhibit notes what their profit would have been as a percentage of the reported numbers if comprehensive tax allocation *had been* continued. The exhibit also highlights the significance of deferred tax liabilities, both booked and contingent, in relation to shareholder funds. The contingent liabilities represent the unbooked taxes on timing differences which management does not believe will be payable in the foreseeable future.

An example of the display of total and contingent deferred taxes is given below from the 1978 Report of John Mowlem and Company Limited:

	Group 1978	
	Full potential liability (000)	*Provisions made (000)*
Accelerated capital allowances	4,942	640
Stock appreciation relief	3,066	1,011
Other timing differences	323	323
Property revaluation surplus	744	349
Advance Corporation Tax	(930)	(930)
	8,145	1,393

The contingent liability here is the difference between the full potential liability and the provision made, £6,752,000.

Disclosure of the potential amount of deferred tax for all timing differences is required under SSAP No. 15 (paragraph 33). With such information on a comparative basis, it would be possible to translate the profit results from full flow through (no deferred taxes) to comprehensive (deferred taxes on all timing differences).

A review of exhibit 1 shows that adoption of SSAP No. 15 had an impact on 1978 profit after tax which ranged from essentially zero in the case of Costain to very substantial in the case of Carpets International. Viewed somewhat differently from the presentation in exhibit 1, the after-tax profit of Carpets International was increased by £2.85 million or 483 percent as a result of SSAP No. 15 adoption. The magnitude of the impact reflects a number of factors: (1) Carpets International recorded no deferred taxes on the key capital allowance and stock appreciation items in 1978, and (2) the low pretax profit level magnified the impact on the SSAP No. 15 tax "saving."

Redman Heenan likewise recorded no deferred tax and indicated (page 26, 1978 Annual Report) in its notes that "No provision is made for taxation deferred by accelerated capital allowance, stock relief and

other timing differences as in the opinion of the directors this will not become payable in the foreseeable future."

Other companies whose profits benefitted less from SSAP No. 15 adoption either continued to record deferred taxes on portions of *all* timing differences or on occasion recorded them fully on some major timing differences (such as stock relief) and only partially or not at all on others (such as capital allowances). This was the case for Simon Engineering Limited in its 1978 report where only timing differences represented by the excess of capital allowances given for tax purposes over the depreciation charged in the accounts were partially exempted from deferred taxation. Comprehensive allocation was applied to all other timing differences.

While the examples summarized here are not a strictly random sample (they were based on reports received from offers given in a U.K. investors' publication), they suffer from no bias known to this writer which would cause them to be unrepresentative. With this caution in mind, it appears that the impact of SSAP No. 15 on U.K. company profits is fairly significant. The presentations in exhibit 1 are a conservative display (as evidenced by the alternative Carpets International computation), and they highlight a clearly material impact in at least eight of the ten cases presented.

Beyond the impact on profits, exhibit 1 also reveals the importance of tax deferral in the capitalization of these companies. Total tax deferrals (both booked and contingent) range up to 72 percent of shareholder funds and average 30 percent for the group. Given the judgment management must make (backed by its auditors) in deciding whether or not to book tax deferrals, the contingent portion of tax deferrals could be viewed as the equivalent of noninterest-bearing financing which is never required to be repaid.[7] The booked tax deferrals share the noninterest-bearing feature but have a reasonably high probability of a near-term payoff requirement. In the United States, of course, comprehensive tax allocation remains the rule and no contingent liability treatment is permitted.[8] The rulemaking body in the United States, the Financial Accounting Standards Board (FASB), was recently drawn into the arena when it issued Statement No. 31 entitled *Accounting for Income Taxes Related to U.K. Tax Legislation Concerning Stock Relief*

[7] John Rayer, "SSAP 15 and the Auditor's Responsibility," *Accountancy* (December 1978): 42-44.

[8] Some limited special exceptions are outlined in APB Opinion No. 23, *Accounting for Income Taxes — Special Areas* (New York: American Institute of Certified Public Accountants, 1972).

and issued an interpretation of APB Opinions No. 11 and 23. Interpretation No. 22 was titled *Applicability of Indefinite Reversal Criteria to Timing Differences.* In the final section of this paper, these pronouncements and the relative merits of the current disparate views (United Kingdom versus United States) will be briefly considered.

TAX ALLOCATION — UNITED STATES VERSUS UNITED KINGDOM

Tax allocation has been debated for years and literally hundreds of articles have appeared on the subject. Since the 1967 issuance of APB Opinion No. 11, *Accounting for Income Taxes,* there has been little or no erosion of the mandated comprehensive tax allocation for all timing differences. Interpretation No. 22 ruled out an expansion of the limited number of timing differences exempted from tax allocation in APB No. 23.

More recently, the FASB issued Standard No. 31, *Accounting for Income Taxes Related to U.K. Tax Legislation Concerning Stock Relief.* Again, the new legislation makes the tax saving from stock-relief deductions permanent after the passage of six years. The FASB took the position that this changed the "character" of the stock-relief deduction. Recording of deferred tax is still required (and stock-relief benefit deferred) "unless it is probable that the benefit will not be recaptured."[9]

In essence, in Standard No. 31, the FASB endorsed the treatment available for stock relief in SSAP No. 15. It emphasized, however, that "the Board believes that the change in the U.K. tax law with regard to stock relief creates a unique situation in accounting for income taxes and that the accounting specified by this Statement should not extend to other situations."[10]

Proponents of a relaxation in the United States of the comprehensive tax allocation requirement might look at Standard No. 31 as a hopeful sign. However, the new U.K. stock relief legislation appears effectively to modify this tax feature from a timing difference to a contingent tax credit. In this sense, it shares the contingent feature of the U.S. investment tax credit. The traditional APB-FASB position that deferred taxes must be recorded on all timing differences remains intact.

In evaluating the impact of SSAP No. 15, a key consideration would seem to be whether users of U.K. versus U.S. company statements have suffered a loss of information. Clearly, SSAP No. 15 reporting conflicts with the comprehensive allocation approach of APB No. 11. A review

[9] Financial Accounting Standards Board, Statement No. 31 (Stamford, Conn.: FASB, 1979), par. 2.
[10] Ibid.

of SSAP No. 15, and the associated financial statements reflecting its application, leads to a conclusion that, far from losing, U.K. users may have gained from SSAP No. 15 over their own SSAP No. 11 (and APB No. 11).

First, under both standards (SSAP No. 15 and APB No. 11), the total deferred tax credit (liability in the United Kingdom) is disclosed. In the United States, it is *all* formally on the balance sheet; in the United Kingdom, it is divided between the balance sheet (booked portion) and the notes (contingent portion).

Next, in the U.S. income statement, the full deferred tax is accrued, consistent with full balance-sheet status for all deferred taxes. In the U.K. statement, it may be that only a portion of the total deferred tax originating in a given period is deducted. The balance will be represented by the increase in the contingent liability over the period, which is disclosed under SSAP No. 15.

Therefore, the shift from SSAP No. 11 to SSAP No. 15 has resulted not in a loss of information but only in its reallocation between the body of the financial statements and the notes thereto. A comparison of information location according to guidelines in the United States (APB No. 11) and the United Kingdom (SSAP No. 15) is summarized in exhibit 2.

Exhibit 2. U.K. versus U.S. Location of Deferred Tax Data

	United Kingdom	*United States*
A. Deferred tax accrual on all originating timing differences in the year	1. Part in the income statement	1. All in the body of the income statement
	2. Balance represented by the change in the contingent deferred tax liability, financial statement notes	
B. Total cumulative deferred taxes	1. Part in the balance sheet — portion deemed payable in the foreseeable future	1. All in the body of the balance sheet
	2. Balance represented by the contingent deferred tax liability in notes to the financial statements	

SUMMARY AND CONCLUSION

While the U.K. statement user has lost no basic information already available under SSAP No. 11, some useful new information may flow from the *process* of management in making *good faith* efforts to apply the principles in SSAP No. 15. Judging whether and when the tax associated with a timing difference will be repaid requires managerial planning and forecasts of key factors such as capital expenditures and inventory levels. A management which decides to record no deferred taxes has made a powerful public statement concerning its future plans. The same is true for the management that continues full accrual of deferred taxes, assuming that such practice is not simply motivated by conservatism.

It is too early at this time to predict the longer-term performance of management in anticipating and providing for its ultimate deferred taxes. Experience may prove that management will tend toward either excessive optimism or conservatism, and a return to the "no judgment" method represented by the predecessor SSAP No. 11 (U.S. APB No. 11 equivalent) will be supported. In the meantime, however, it remains a curiosity that, in this matter of accounting policy implementation, the winds of free enterprise are brisker on the other side of the Atlantic.

Public Accountants' Independence: Some Evidence in a Canadian Context

JOEL H. AMERNIC and NISSIM ARANYA*

Independence has always been a concept fundamental to the accounting profession, the cornerstone of its philosophical structure.[1]

The notion of "independence" has long been a basic concept of the public accounting profession.[2] The value of the practitioner's work rests largely on the degree to which he or she is perceived to be "inde-

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The authors acknowledge the financial support of the University of Toronto; the Professional Accounting Program, School of Business Administration, University of California, Berkeley; and various public accounting firms in Canada. The cooperation of the Canadian Institute of Chartered Accountants and the Institute of Chartered Accountants of Ontario is also acknowledged. Professors B. G. B. Galvin of the University of Toronto and T. H. Beechy of York University offered inciteful comments on a previous draft.

[1] American Institute of Certified Public Accountants, *Restatement of the Code of Professional Ethics* (New York: AICPA, 1972), p. 8.

[2] See R. Glen Berryman, "Auditor Independence: Its Historical Development and Some Proposals for Research," in *Contemporary Auditing Problems: Proceedings of the 1974 Arthur Andersen University of Kansas Symposium on Auditing Problems,* ed. Howard F. Stettler (Lawrence, Kansas: University of Kansas School of Business, 1974), pp. 1-15. Berryman traces the concern for auditor's independence back to the English Companies Clauses Consolidation Act of 1845. His conception of what independence means is interesting: "The concept of independence implies freedom from control and domination by another party. It implies impartiality and the absence of bias in the gathering of evidence, interpretation of evidence and opinion formulation. The auditor as an independent party must be willing and be in a strong position to insist on that course of action which his professional judgment urges is the appropriate one in the circumstances."

pendent" and not subject to influence in the performance of duties. While the older professional literature on independence is concerned mainly with the public accountant's role as auditor,[3] the recent formalization of this role in nonaudit situations, such as review engagements, widens the concept to include virtually all situations in which the public accountant offers professional accounting and auditing services within the normal meaning of these terms.[4]

The degree to which public accountants are indeed "independent" has been questioned with increased frequency in the past few years, especially in the United States, but also elsewhere. In the United States, the Metcalf Report[5] and the Moss Report[6] have seriously challenged auditors' independence. Indeed, designing proposals for maintaining the independence of auditors was a primary focus of the 1978 Cohen Commission Report. In Canada, the Special Committee to Examine the Role of the Auditor, in its report (the Adams Report), has performed a reexamination of the independence concept. British writers have also alluded to this issue: Professor Firth has listed "lack of independence" as one of three major areas of concern for which the auditing profession has come under increasing fire.[7] He indicates that there has been "some influential comment saying that the revised ethical guidelines released [by the Auditing Practices Committee] at the end of 1977 are not sufficiently strong enough to allay fears of auditor independence."[8]

It appears, then, that the variables affecting independence are certainly worthy of systematic investigation. Since "independence" is a hallmark of the profession, it is somewhat surprising that so little research has been performed in this area. As Nichols and Price note, "In spite of the apparent importance of auditor independence, little attention has been given in the literature to the variables which may affect

[3] See, for example, the foreword to the Institute of Chartered Accountants of Ontario, *Members' Handbook* (Toronto: Institute of Chartered Accountants of Ontario, 1973), and Council Interpretation C1 204 on Objectivity.

[4] Indeed, Rule 102 ("Integrity and Objectivity") of the 1973 AICPA Rules of Conduct states: "A member shall not knowingly misrepresent facts, and when engaged in the practice of public accounting, including the rendering of tax and management advisory services, shall not subordinate his judgment to others. . . ."

[5] U.S. Senate Subcommittee on Reports, Accounting, and Management of the Committee on Government Operations of the United States, *The Accounting Establishment* (Washington: Government Printing Office, 1976).

[6] U.S. House of Representatives Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce, *Federal Regulation and Regulatory Reform* (Washington: Government Printing Office, 1976).

[7] Michael Firth, "Recent Empirical Studies in Auditing," *Accountancy* (February 1979): 68.

[8] Ibid.

the auditor's ability to withstand pressure from a client."[9] The purpose of the present paper is to contribute to an understanding of the independence concept, insofar as it relates to the practice of public accounting.

This paper will first review the literature to discover insights into the topic which might be helpful in formulating research questions. Second, the research issues addressed in this paper are described, and research hypotheses flowing from these issues are constructed. Third, a research plan involving the mail questionnaire technique is described; the technique was used to gather data to test the research hypotheses. Next, the hypotheses are tested using the data, and finally, some implications following from the results are suggested. We will use the terms "public accountant" and "auditor" interchangeably throughout.

The term "independence" may mean different things to different people;[10] indeed, professional bodies often talk of two aspects of the concept, namely, the *fact* and the *appearance* of independence.[11] An interesting definition of independence is suggested by Nichols and Price:

> In the auditor-firm conflict situation, the power of the firm can be represented by its ability to influence the audit or final report of the auditor. The independence of the auditor can be represented by the auditor's ability to withstand such influence attempts.[12]

Of course, since we cannot directly monitor the "auditor's ability to withstand such influence attempts," the existence of independence (or its lack of existence) in any particular situation is not observable. Whether or not an auditor/accountant is independent is usually inferred from his or her relationship with the client firm (that is, does the accountant own shares, and so on?) and from the behavior of the accountant (did the accountant perform in a manner that *implies* a lack of independence?)[13]

Research on auditor's independence may conceivably focus on a

[9] Donald R. Nichols and Kenneth H. Price, "The Auditor-Firm Conflict; An Analysis Using Concepts of Exchange Theory," *Accounting Review* (April 1976): 355.

[10] For example, David Lavin, "Perceptions of the Independence of the Auditor," *Accounting Review* (January 1976): 41-50, found that "Big 8" CPA firm members differed significantly from "Other CPA" firm members in their assessment of whether or not auditors were independent in several hypothetical situations.

[11] American Institute of Certified Public Accountants, *Code of Professional Ethics* (New York: AICPA, March 1975).

[12] Nichols and Price, "Auditor-Firm Conflict," p. 336.

[13] Berryman's description of independence also reinforces the notion that it is an unobservable. See his "Auditor Independence," pp. 1-15.

wide variety of issues. For example, the object of concern (that is, the dependent variable) might be users' perception of the auditor's independence, management's perception of the auditor's independence, and so on. The independent variables under examination might be structural factors (such as the relative size of the client in relation to the auditor's other clients), psychological factors (for example, job satisfaction and personality type of the auditor), and so forth. Previous research focusing on several of these issues is briefly reviewed here. The present research centers on the *auditor's* perception of the degree to which he or she is independent, an aspect of the independence question which has not been examined to any degree previously. A discussion of the specific issues addressed in this research follows in the next section.

PREVIOUS RESEARCH

Goldman and Barlev developed a behavioral model of auditor independence, in which the degree to which an auditor exhibits independent (and therefore "correct") behavior depends upon the relative power of the firm and the auditor.[14] They argue that a power assymmetry exists in favor of the firm because the traditional sources of professional power (such as the degree to which the professional's services are nonroutine and thus, according to Goldman and Barlev, important to the client) are lacking in auditing.

Loeb suggests that the Goldman and Barlev model is incomplete[15] and introduces a model based upon work done by Carlin in the legal profession. The Loeb model suggests that

> [faced] with client pressure to violate professional standards . . . the CPA's reaction would be the result of several variables. The first variable is the place of the CPA's firm in the organization of the accounting profession. The accounting profession has economically strong firms (e.g., national firms) that do not depend upon any one client for a significant portion of their billings. . . . [it] is very possible that a CPA's reaction to client pressure may be related to the economic stability of his (the CPA's) firm. . . . Additionally, the CPA's reaction to the possible loss of gross billings may be affected by . . . the ethical climate . . . of the professional's office . . . then, too, a CPA's reaction to client pressure may be affected by the CPA's concern with ethics. . . . It is also possible that a CPA's position in his firm may influence his reaction to client pressure.[16]

[14] Arieh Goldman and Benzion Barlev, "The Auditor-Firm Conflict of Interests: Its Implications for Independence," *Accounting Review* (October 1974): 707-18.
[15] Stephen E. Loeb, "The Auditor-Firm Conflict of Interests: Its Implications for Independence: A Comment," *Accounting Review* (October 1975): 844-47.
[16] Ibid., pp. 846-47.

Based partly on Loeb's critique, Goldman and Barlev extended their previous model to include additional "constraining" factors, such as "auditor's status within the profession."[17]

In a recent paper, Imhoff investigated the opinions of CPAs and users of accounting reports concerning their perceptions of the independence of auditors who leave public practice to join client companies in several hypothetical situations.[18] The results seemed to indicate that CPAs perceived the severity of this particular facet of the independence issue differently than did selected users. Also, Imhoff found that the time interval between the CPA's involvement in the audit of the client and subsequently joining the client organization affected perceptions of independence, as did knowledge concerning the rank of the ex-auditor (that is, "supervised audit" versus "worked in a nonsupervisory position").

Nichols and Price employed concepts from exchange theory to analyze the auditor-firm conflict, and thus the factors impinging upon independence.[19] One of their conclusions was that, as the degree of routine of the auditor's service increases, the power of the auditor to withstand threats of replacement increases. This is exactly the opposite conclusion that Goldman and Barlev reached concerning the relationship between audit routine and auditor power to withstand threats. As is the case in most other areas of accounting, different frameworks of analyzing the independence issue (that is, Goldman and Barlev's versus Nichols and Price's) lead to different conclusions regarding the identity and importance of factors influencing independence, and lead, consequently, to different tentative policy prescriptions.

Pany and Reckers, in a recent paper, investigated the impact of gifts and discount purchase arrangements on stockholder perceptions of auditor independence.[20] They also wanted to see whether the relative size of the client had an impact on stockholder perceptions of auditor independence. The present research differs from their research since we are concerned here with the auditor's perceptions, not the user's (see the next section). In addition, we are concerned with auditors' reac-

[17] Arieh Goldman and Benzion Barlev, "The Auditor-Firm Conflict of Interests: Its Implications for Independence: A Reply," *Accounting Review* (October 1975): 851.

[18] Eugene A. Imhoff, Jr., "Employment Effects on Auditor Independence," *Accounting Review* (October 1978): 869-81.

[19] Nichols and Price, "Auditor-Firm Conflict."

[20] Kurt Pany and Philip M. J. Reckers, "The Effect of Gifts, Discounts, and Client Size on Perceived Auditor Independence," *Accounting Review* (January 1980): 50-61.

tions to their *real* situation, while Pany and Reckers developed a questionnaire using seven *hypothetical* situations. They reported results which indicated that a gift or discount as low as $3 has an effect on stockholders' perception of auditor independence, and they provided some evidence that the size of the "client — gift-giving" interaction was not significant to stockholders' perception of independence. Their results must be conditioned by their low usable response rate of 26 percent, and by the design of their study, which requested that *real* investors report their degree of agreement to several *hypothetical* situations (that is, an external validity problem).

BACKGROUND

It is probable that any comprehensive model of the public accountant-client conflict situation, and thus of the independence issue, would contain so many variables so as to be virtually a huge contingency model (see, for example, Loeb's long list of candidates for independent variables).[21] While contingency models are useful for sensitizing participants (for example, auditors) and rulemakers (the various professional bodies, government agencies, and so on) to the crucial interaction of numerous variables in the independence issue, they may not be easily amenable to empirical assessment. Indeed, parsimony has long been considered a desirable feature in model-building — of course, there is a trade off between being able to *predict* virtually individual auditor behavior using a multivariable contingency model, and being merely able to *describe,* in general terms, certain aggregate trends. We lose the ability to predict "micro" behavior, but we still gain considerable insight into certain factors creating (or, more precisely, coexisting with) sensitive (that is, "potential lack of independence") situations.

We will focus, then, on two structural factors which potentially may affect auditor's independence: the size of the audit firm and the auditor's level in the hierarchy of the firm. These factors are, in a sense, the independent variables in our tentative "model." From a policy-making perspective (that is, the setting of ethical rules for the guidance of the whole profession), these two factors are quite important; for example, if we find in the course of several research studies that lower-level auditors in large public accounting firms consistently perceive a significant lack of independence, then we would have evidence supporting a professional rule requiring (for example) increased education in

[21] Loeb, "Auditor-Firm Conflict."

ethics for new professionals, and so forth. In our model, we have omitted client-specific and auditor-specific variables, not because we believe them to be unimportant, but because we feel that they are captured somewhat within the two independent variables already in the model, and also because of our desire for a relatively simple model. The dependent variable is the *auditor's* perception of his or her own independence in the *actual* situation. We are concerned with *perceptions* of independence since (as already discussed), actual independence is apparently unobservable. Further, in contrast to most previous research, we are concerned with the auditor's perceptions, not those of users and management, and we focus on the auditor's real (as opposed to a hypothetical) situation. In addition, we will explore two aspects of the auditor's perception of his or her independence: the *fact* ("is") of independence, and the *desirability* ("should be") of such independence.

Our model is shown here. The degree to which a public accountant (auditor), who is characterized by belonging to a

$$\begin{bmatrix}\text{small firm}\\ \text{medium firm}\\ \text{large firm}\end{bmatrix} \text{ and by being } \begin{bmatrix}\text{a senior}\\ \text{a manager}\\ \text{a partner or}\\ \quad\text{sole practitioner}\end{bmatrix} \text{, perceives that}$$

FIRM SIZE — LEVEL IN HIERARCHY OF FIRM

$$\begin{bmatrix}\text{she/he}\\ \text{public accountants in general}\end{bmatrix} \begin{bmatrix}\text{is (are)}\\ \text{should be}\end{bmatrix} \text{ independent, is } \begin{bmatrix}\text{high}\\ \text{low}\end{bmatrix}.$$

AUDITOR'S PERCEPTION

The variable FIRM SIZE is felt to be important for reasons given by Loeb.[22] The variable LEVEL IN HIERARCHY OF FIRM is also mentioned as being possibly important insofar as a public practitioner's independence attitude is concerned. It is very difficult to specify a priori the direction of the effect that these potentially important variables might have on aspects of auditor independence. Loeb seems to suggest that public accountants in larger firms would be expected to be "more independent" since their firms tend to be economically strong and do not depend upon any one client for a significant portion of their billings. Further, the Accountants' International Study Group recommended that auditors be restrained from accepting engagements for which the fee makes a "significant" (that is, 10 percent or greater) portion of the

[22] Ibid., pp. 846-47.

auditor's total fee income.[23] On the other hand, the drafters of the Metcalf Report felt that they had evidence of the lack of independence of the large accounting firms because of the close relationships created by long association of large accounting firms and their clients.[24]

Insofar as the LEVEL IN HIERARCHY OF FIRM variable and its effect on independence are concerned, there is some indirect but conflicting evidence available in the literature. Sorensen and Sorensen found that as the level in the firm increased (from junior through partner), individuals exhibited an increase in bureaucratic orientation and a decrease in professional orientation.[25] Insofar as professional orientation is related to the "independence" attitude of the practitioner, their results would suggest that higher levels in the hierarchy might be "less independent." Of course, the critical (and unconfirmed) linkage here would be between professional orientation and independence attitude. Further, arguments can be advanced that suggest that partners have more at stake in the profession than their more junior colleagues, and thus would be expected to subscribe to a greater extent to notions important to the profession, such as "independence."[26]

For these reasons, therefore, we have chosen not to specify the direction of influence that the independent variables have on the aspects of the independence issue with which we are concerned.

RESEARCH HYPOTHESES

Hypotheses Concerning the Public Accountants' Perception of the *Fact* of Independence

HA1 and HA2 are concerned with public accountants' perception of the degree to which Canadian chartered accountants (CAs) in public practice are independent (in the sense considered here) in general.[27]

HA1 — Public accountants belonging to firms of different sizes, but at the same level in the hierarchy of their firms, exhibit differences in the way they perceive that CAs in public practice in Canada have the

[23] Accountants' International Study Group, *Independence of Auditors,* Study No. 16 (New York: American Institute of Certified Public Accountants, 1976).
[24] U.S. Senate, *Accounting Establishment,* p. 21.
[25] James E. Sorensen and T. L. Sorensen, "The Conflict of Professionals in Bureaucratic Organizations," *Administrative Science Quarterly* (1974): 98-106.
[26] At least part of the subpartner group are in a transitional stage of their careers; they are an important source of supply for industry and government, as well as future partners in public firms. Casler, as cited by Loeb, questioned the strength of commitment that such transient members have to the standards of the profession. See Stephen E. Loeb, "A Survey of Ethical Behavior in the Accounting Profession," *Journal of Accounting Research* (Autumn 1971): 293.
[27] Canadian CAs are the professional equivalent of American CPAs.

opportunity to act according to their professional judgment, without being influenced by their clients.

HA2 — Public accountants at different levels in the hierarchy of their firms, but belonging to firms of the same size, exhibit differences in the way they perceive that CAs in public practice in Canada have the opportunity to act according to their professional judgment, without being influenced by overt or covert pressures exerted by their clients.

HB1 and HB2 are concerned with public accountants' perception of the degree to which *they themselves* are in fact independent.

HB1 — Public accountants belonging to firms of different sizes, but at the same level in the hierarchy in their firms, exhibit differences in the way they perceive that they are independent in *their own* work situation.

HB2 — Public accountants at different levels in the hierarchy of their firms, but belonging to firms of the same size, exhibit differences in the way they perceive that they are independent in *their own* work situation.

Hypotheses Concerning the Public Accountants' Perception of the *Desirability* of Independence

HC1 and HC2 are concerned with public accountants' attitudes toward the *desirability* of modifying one's standards of independence under certain circumstances.

HC1 — Public practitioners belonging to firms of different sizes, but at the same level in the hierarchy in their firms, exhibit differences in their acceptance of situations in which their independence *should be* constrained.

HC2 — Public practitioners at different levels in the hierarchy of their firms, but belonging to firms of the same size, exhibit differences in their acceptance of situations in which their independence *should be* constrained.

RESEARCH PLAN AND INSTRUMENTS

Subjects

The subjects (public accountants) whose responses were employed in this research were part of a larger sample. This larger sample is described as follows: a pretest of 100 CAs from Ontario, Canada, yielded a 48 percent response rate. The subsequent main sample included 2,590 CAs of all job frameworks, selected randomly from all over Canada (the master membership list of CAs was provided by the Canadian Institute of Chartered Accountants, representing the target population); this was approximately 10 percent of all English-speaking CAs. The response

rate was 46 percent (1,206 CAs), and the respondents comprised a variety of CAs (see exhibit 1).

Exhibit 1. Respondents by Job Framework

	Respondents (%)		Actual distribution of CA population* (%)
Partners (or sole practitioners)	29		28
Employees of CA firms	22		21
Employees in the public sector	12		11
Employees in the manufacturing sector	13	30	33
Employees in financial institutions	4		
Employees in retail organizations	13		
Others	7		7
	100		100

* Source: Derived from information in CICA, *1977-1978 Annual Report and Financial Statements* (Toronto: CICA).

A possible nonresponse bias was checked through an additional intensive follow-up sample of 138 CAs (10 percent of the nonrespondents). Ninety-three CAs (67.4 percent) responded, and no significant differences at an α level of 0.10 were found between the answers of the original respondents and those of the forced respondents. Further, as may be seen from exhibit 1, the *distribution* of sample respondents by job framework corresponded very closely with the actual job framework distribution of the total population of CAs (chi-square = 0.448 with 4 degrees of freedom; thus, we cannot reject the hypothesis that the distribution of respondent CAs by job framework is the same as the distribution by job framework of the population of CAs). These two pieces of evidence are suggestive of the *lack* of a significant nonresponse bias.

Instruments

The subjects were sent a questionnaire that, after minor modifications based on the pretest, included (among others) questions on firm size, level in hierarchy, perceptions of certain aspects of independence, and a social desirability scale. The questions relevant to this study are

reproduced in exhibit 2. For purposes of this study, three hierarchy categories were used: Intermediate and Senior, Supervisor or Manager, and Partner. Also, three size categories were used: 1-10, 11-100, and 101 plus. Thus, there were nine combinations of "levels in firm" and "size of firm." These nine combinations are summarized in exhibit 3. Because of the small number of "Intermediate and Seniors," and "Supervisors or Managers," in the smallest sized firms, these two groups (Group 1 and Group 2) were dropped from further analysis.

Exhibit 2. Questions Used in the Study

Question on Level in Hierarchy of Public Firm

If you are associated with a CA firm, please answer this question: Indicate your present position:

Intermediate (qualified past year)	Senior	Supervisor or manager	Partner
1	2	3	4

Question on Firm Size

Please indicate the size of the CA firm with which you are associated (i.e., please indicate the *total* number of professional staff, students, and support staff such as secretaries).

1-5	6-10	11-20	21-50	51-100	101 plus
1	2	3	4	5	6

HA

Question on CAs' Perceptions of Public Practitioners' Independence in General

CAs (in public practice) in Canada have the opportunity to act according to their professional judgement, without being influenced by overt or covert pressures exerted by their clients and/or employer organization.

Strongly disagree	Moderately disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Moderately agree	Strongly agree
1	2	3	4	5	6	7

greater independence →

HB

Question on CAs' Perceptions of the Degree to which They Themselves Are in Fact Independent

Exhibit 2 (cont.)

Sometimes the nature of the organization, the objectives which the CA is expected to fulfill, and the personalities of the superior and/or colleagues of the CA cause him to use accounting principles in a way which is different from the way which is required or implied by the best professional judgement. This description fits various situations in *your* work.

Strongly disagree	Moderately disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Moderately agree	Strongly agree
1	2	3	4	5	6	7

← greater independence

HC

Question on CAs' Attitudes toward the Desirability of Modifying One's Standards of Independence under Certain Circumstances

Same initial assertion as for above question immediately followed by —

Do you think that this description should be acceptable in various areas of your work?

Strongly disagree	Moderately disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Moderately agree	Strongly agree
1	2	3	4	5	6	7

← greater independence

Exhibit 3. The Nine Combinations Examined in the Study

Group	*Level in hierarchy*	*Size of firm*	*Number of CAs in sample**
1**	Intermediate and senior	1 to 10	5
2**	Supervisor or manager	1 to 10	11
3	Partner	1 to 10	127
4	Intermediate and senior	11 to 100	34
5	Supervisor or manager	11 to 100	57
6	Partner	11 to 100	104
7	Intermediate and senior	101+	51
8	Supervisor or manager	101+	105
9	Partner	101+	111
			605

* Varied slightly from question to question.
** Dropped from subsequent analysis because of small sample size.

RESULTS

HA — Perceptions of Public Practitioners' Independence in General

The statistical results are shown in exhibits 4, 5, and 6. In general, as may be seen from exhibit 5, there are significant differences in the way this question was answered. Further, HA1 (same level in hierarchy, but different-sized firms) was only partially supported; for Partners (Groups 3, 6, and 9), the mean responses increased as firm size increased (see

Exhibit 4. HA — Means of Responses

Group	*n*	*Mean*
3	127	5.2992
4	34	4.0000
5	57	4.7368
6	104	5.4231
7	51	3.9804
8	105	4.9905
9	111	5.7027
	605	5.0645*

* Includes sixteen respondents in Groups 1 and 2.

Exhibit 5. HA — Analysis of Variance

For the seven groups, a one-way ANOVA with 8 degrees of freedom gave an F-ratio of 9.069, which is significant at the 0.0000 level.

Exhibit 6. HA — Test For Significant Differences between Groups*

		Group					
		4	5	6	7	8	9
Group	3	4.095 (0.000)	2.147 (0.032)	−0.570 (0.569)	4.842 (0.000)	1.425 (0.155)	−1.890 (0.050)
	4		−2.070 (0.039)	−4.385 (0.000)	0.054 (0.957)	−3.055 (0.002)	−5.287 (0.000)
	5			−2.535 (0.012)	2.389 (0.017)	−0.938 (0.348)	−3.608 (0.000)
	6				5.137 (0.000)	1.903 (0.057)	−1.247 (0.213)
	7					−3.602 (0.000)	−6.197 (0.000)
	8						−3.184 (0.002)

* A two-tailed t-test (pooled variance estimate) was used. The first number shown in each cell is the t-value, and the second number (in parentheses) is the probability level.

exhibit 4), but the only significant difference (at $\alpha = 5$ percent) was between Groups 3 and 9 (see exhibit 6). For Supervisors or Managers (Groups 5 and 8), the mean responses also increased as firm size increased (see exhibit 4), but the only difference susceptible to testing (Group 5 versus Group 8) did not show a significant difference (exhibit 6). For Intermediates and Seniors (Groups 4 and 7), no trend in mean values of responses was apparent from exhibit 4, and the Group 4 versus Group 7 difference was not significant (see exhibit 6). Overall, only for CAs at the Partner level can we say that, as firm size increases, perceptions of the degree to which public practitioners' independence — in general — changes (and in fact, increases).

HA2 (different level in hierarchy, but same-sized firms) was accepted. Exhibit 4 demonstrates that for each size cluster (Groups 4, 5, and 6; and Groups 7, 8, and 9), the mean value of the responses increases monotonically. For Groups 4, 5, and 6, all differences were significant at $\alpha = 5$ percent; also for Groups 7, 8, and 9, all differences were significant at $\alpha = 5$ percent. Thus, as firm size is held constant, CAs at different levels in the firm hierarchy perceive the *fact* of independence for public practitioners, in general, quite differently — the higher one is in the hierarchy, the greater is the degree to which CAs of a given firm size perceive that CAs in public practice are in general independent (at least insofar as independence is questioned in this part of the study). A rather remarkable feature of the responses may be noted in exhibit 4. Group 7's mean response of 3.9804 and Group 4's mean response of 4.0000 indicated neutrality on the subject of general independence on average.

HB — Public Practitioners' Perceptions of the Degree to Which They Themselves Are in Fact Independent

The statistical results are shown in exhibits 7, 8, and 9. In general, as may be seen in exhibit 7, there are significant differences in the way this question was answered. Further, HB1 (same level in hierarchy, but different-sized firms) was only partially accepted. For Partners (Groups 3, 6, and 9), as firm size increases, the mean value of the response decreases, indicating greater perceived *fact* of one's independence as firm size increases (exhibit 8). Only the Group 3 versus Group 9 difference

Exhibit 7. HB — Analysis of Variance

For the seven groups, a one-way ANOVA with 8 degrees of freedom gave an F-ratio of 4.388, which is significant at the 0.000 level.

Exhibit 8. HB — Means of Responses

Group	n	Mean
3	126	2.8095
4	34	3.7059
5	57	3.1053
6	103	2.5243
7	51	3.2745
8	105	3.2000
9	110	2.2091
	602	2.8505*

* Includes sixteen responses in Groups 1 and 2.

Exhibit 9. HB — Test for Significant Differences between Groups

		Group					
		4	5	6	7	8	9
Group	3	−2.595 (0.010)	−1.037 (0.300)	1.201 (0.230)	−1.568 (0.118)	−1.653 (0.099)	2.574 (0.010)
	4		1.551 (0.121)	3.342 (0.001)	1.090 (0.276)	1.434 (0.152)	4.268 (0.000)
	5			1.969 (0.049)	−0.491 (0.623)	−0.322 (0.747)	3.072 (0.002)
	6				−2.452 (0.015)	−2.726 (0.007)	1.286 (0.199)
	7					0.244 (0.807)	3.519 (0.000)
	8						4.063 (0.000)

was significant at $\alpha = 5$ percent, however (exhibit 9). For Supervisors or Managers (Groups 5 and 8), the difference was not significant (exhibit 9). Insofar as Intermediates and Seniors are concerned (Groups 4 and 7), the same downward trend in mean response values holds (exhibit 8), but the Group 4 versus 7 difference was not significant (exhibit 9). Overall, as firm size increases, CAs at similar levels in the firm hierarchy *seemed* to perceive that they were in fact more independent, although this trend was significant only for the Group 3 versus Group 9 difference.

HB2 (different level in hierarchy, but same-sized firms) was strongly accepted. From exhibit 8, it may be seen that for each size cluster (Groups 4, 5, and 6; and Groups 7, 8, and 9), the mean value of the response decreases monotonically. For Groups 4, 5, and 6, only the

Group 4 versus Group 5 difference was not significant at the $\alpha = 5$ percent level (see exhibit 9). For Groups 7, 8, and 9, only the Group 7 versus Group 8 difference was not significant. Thus, as firm size is held constant, CAs at different levels in the firm hierarchy perceive the *fact* of their own independence somewhat differently — the higher one is in the hierarchy, the greater is the degree to which CAs perceive that they themselves can act independently (at least insofar as we measured the aspect of independence perceived by our subjects). It should be noted from the analysis shown in exhibit 8 that not one of the seven groups perceived, on average, that they were not independent (as measured here); Group 4 (Intermediates and Seniors for firms having 11 to 100 staff members) had a mean response value of 3.7059, which is fairly close to neutrality on this subject.

HC — Public Practitioners' Attitudes toward the Desirability of Modifying One's Standards of Independence under Certain Circumstances

The statistical results are shown in exhibits 10, 11, and 12. As may be seen from exhibit 10, there are significant differences in the way this question was answered. Further, HC1 (same level in hierarchy, but different-sized firms) was partially accepted. For Partners (Groups 3, 6, and 9), as firm size increases, the mean value of the response decreases, indicating greater disagreement with the idea that one's "independence" should be relaxed under certain circumstances (exhibit 11). The Group 3 versus Group 6, and Group 3 versus Group 9 differences

Exhibit 10. HC — Analysis of Variance

For the seven groups, a one-way ANOVA with 8 degrees of freedom gave an F-ratio of 2.419, which is significant at the 0.0142 level.

Exhibit 11. HC — Means of Responses

Group	*n*	*Mean*
3	126	2.7857
4	34	2.8824
5	57	2.5088
6	102	2.2353
7	51	2.5490
8	104	2.5481
9	109	2.0000
	599	2.4574*

* Includes sixteen responses for Groups 1 and 2.

Exhibit 12. HC — Test for Significant Differences between Groups

		Group 4	5	6	7	8	9
Group	3	−0.310 (0.757)	1.075 (0.283)	2.561 (0.011)	0.884 (0.377)	1.112 (0.267)	3.722 (0.000)
	4		1.068 (0.286)	2.025 (0.043)	0.9333 (0.351)	1.049 (0.295)	2.784 (0.006)
	5			1.025 (0.306)	−0.129 (0.897)	−0.148 (0.883)	1.929 (0.054)
	6				−1.134 (0.257)	−1.391 (0.165)	1.058 (0.290)
	7					0.003 (0.997)	2.005 (0.045)
	8						2.478 (0.013)

were significant at $\alpha = 5$ percent, but the Group 6 versus Group 9 difference was not. For Supervisors or Managers (Groups 5 and 8), there is no clear trend; the difference was not significant. For Groups 4 and 7 (Intermediates and Seniors), again no clear trend is evident, and the Group 4 versus 7 difference is not significant at $\alpha = 5$ percent.

HC2 (different level in hierarchy, but same-sized firms) was also partially accepted. Exhibit 11 illustrates that for each size cluster (Groups 4, 5, and 6; and Groups 7, 8, and 9), there was an indication of a trend. For Groups 4, 5, and 6, the mean response decreases, and for Groups 7, 8, and 9 it also decreases. For Groups 4, 5, and 6, only the Group 4 versus Group 6 difference was significant at $\alpha = 5$ percent. For Groups 7, 8, and 9, the Group 7 versus Group 9 difference, and the Group 8 versus Group 9 difference were significant at $\alpha = 5$ percent (see exhibit 12). Thus, we have some evidence suggesting that, if firm size is held constant, CAs at different levels in the firm hierarchy have different attitudes toward the desirability of modifying their standards of independence under certain circumstances; it appears that such modification becomes less acceptable as one goes up the hierarchy. Also note (from exhibit 11) that the means for this question were quite low, indicating an overall disagreement with the suggestion in the question.

DISCUSSION

The degree to which support was found for each hypothesis is summarized in exhibit 13, and the mean values, by group, for each question are plotted in exhibit 14. In no case could we fail to support a null

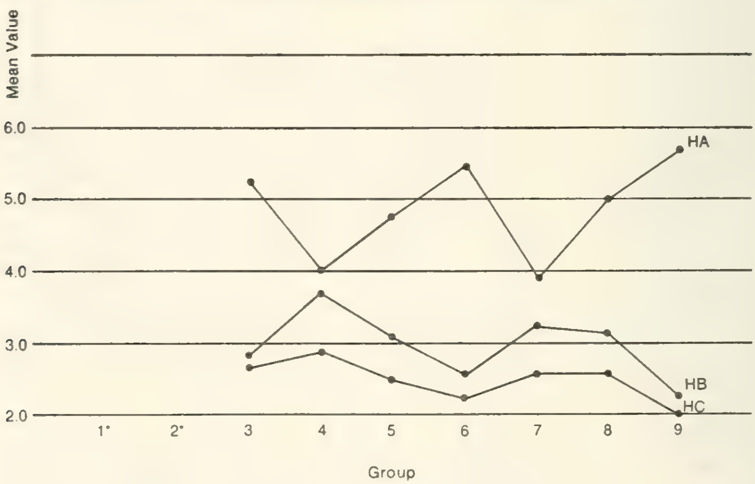
Exhibit 13. Summary of Results

Hypothesis	*Results**
HA1	Partially supported
HA2	Strongly supported
HB1	Partially supported
HB2	Strongly supported
HC1	Partially supported
HC2	Partially supported

* Three categories were used (unsupported, partially supported, and strongly supported), and results were allocated to these based upon the discussion under each hypothesis in the prior sections. Readers may wish to judge the reasonableness of the summary for each hypothesis for themselves.

hypothesis, at least to some degree; thus, we can conclude that both firm size and level in hierarchy appear to be important variables in accounting for differences in the three aspects of the "independence" concept that we examined in this paper. Insofar as *direction* is concerned, it seems that Loeb's suggestion that public accountants in larger firms are "more independent" appears to be supported by the evidence — large firm practitioners, on average, perceive that CAs *in general,* and they themselves, are more independent than do smaller firm practitioners (holding level in hierarchy constant). In addition, they appear also

Exhibit 14. Plot of Mean Values for Each Question By Group



* Dropped from analysis because of small sample size.

to reject the acceptability of modifying one's standards of independence to a slightly greater degree than smaller-firm practitioners.

As far as the direction of the effect of the "level in hierarchy" variable is concerned, it appears that practitioners at higher levels in the hierarchy are "more independent." Partners perceive that CAs *in general,* and they themselves, are more independent than do CA firm employees (the evidence here is rather strong). In addition (although the evidence is somewhat weak), they appear also to reject the acceptability of modifying one's standards of independence to a slightly greater degree than do CA firm employees.

Thus, we may conclude, on the basis of the evidence presented, that there is a differential distribution of perceptions of, and attitudes toward, independence among public practitioners of firms of different sizes and at different levels in the hierarchy of the firm. Partners appear to be "more independent" than employees, and large-firm public practitioners appear to be "more independent" than smaller-firm public practitioners. Further, the results may hold for the whole population of CAs in Canada, since our nonresponse bias tests appear to indicate the absence of such of a bias. (Of course, one is never certain, even if the tests are favorable. For example, as mentioned in a previous section, we used an intensive follow-up procedure as one of the tests of nonresponse bias; the very act of intensively following up nonrespondents may create a bias.) We next discuss another possible source of error in the results, after which we discuss the implications of the results.

Validity of Respondents' Answers

In a mail questionnaire survey, the possibility always exists that respondents have not answered truthfully. We attempted to reduce the probability of this error in the following ways. A cover letter was enclosed with the questionnaire, explaining the purpose and importance of the survey. In addition, a list of supporting organizations (including the national professional association, the Canadian Institute of Chartered Accountants) was enclosed, in order to enhance the credibility and perceived importance of the survey. Respondents were informed in the cover letter that their individual responses would remain anonymous, and that only aggregated data would be analyzed. Respondents were offered a summary of the results if they requested such by a separate letter.

In addition, we correlated the responses to the questions with a social desirability scale;[28] Pearson's coefficient was below 0.10 in all

[28] D. Crowne and D. Marlowe, *The Approval Motive* (New York: Wiley, 1964).

cases. Thus, we may be somewhat confident that the respondents were not providing "socially desirable" answers but were, in fact, providing their true feelings. Further support for this conclusion is provided by an examination of the *distribution* of responses for the questions. For example, as shown in exhibit 15, approximately 23 percent of the partners and 38 percent of the employees *agreed* (at least to some extent) that they are not always independent in their work. Since independence is a hallmark of the public accounting profession, such a result (while interesting) is unexpected, and is certainly not the socially desirable answer. Thus, it is consistent with the conclusion that the respondents appeared to be providing their true feelings.

IMPLICATIONS

The idea of "independence" is central to the public accounting profession; it is currently being re-examined by both the profession itself and other institutions (such as government) in the profession's environment. Such a re-examination, to be effective in terms of the meaningfulness of the resultant rules, must be based upon a sound knowledge of the factors influencing (either directly or as mediating variables) aspects of independence. In this paper, we have provided some empirical evidence which suggests that firm size and level in hierarchy are two such important factors, and that employees in general, and small-firm practitioners in general, appear to be "less independent" than partners and large-firm practitioners. The policy implications of these findings are many, and may include the following:

1. Additional intensive education in the area of ethics — and most especially concerning the central place that the multi-faceted independence concept has in public accounting — is apparently called for, especially for employee CAs (and most especially for employee CAs of smaller firms). Such education could take place either in formal courses, or in seminars, and could use case material to examine and reinforce the independence notion.

It is interesting to note that the Cohen Commission[29] felt that new entrants to the profession *in general* lacked professional identity, which the commission suggested involved dedication to a professional ideal, responsibility to users, and loyalty to the profession as a whole. Our results appear to lend some support to these views, and thus to the notion that improvements in education in this area are necessary. An op-

[29] Commission on Auditors' Responsibilities, *Report, Conclusion, and Recommendations* (New York: CAR, 1978), pp. 87-88.

posing and possibly more valid view was offered by a reader of this paper, who commented, "Can one teach ethical behavior by courses or seminars? I doubt it. I believe that the answer (and it's only a belief) lies in better screening of students."

2. Rules could be implemented guaranteeing the independence of audit firms when the fees from one client or group of associated clients compose an unduly large percentage of the firm's total fee. Loeb suggests that this situation occurs less for a large firm than for a small firm; if that is so, then our results provide empirical evidence that smaller firms are more susceptible to impairment of their independence than larger firms, because of this undue reliance on a few relatively large clients. In fact, the Adams Report recommends that such a rule be implemented.[30] The Cohen Commission was concerned with the more general problem of protecting the independent auditor from management pressure and emphasized the importance of audit committees in this regard.[31] The commission also supported the concept of disclosure of reasons for a change in auditors (similar to the disclosure required in the SEC's ASR 194) for *all* companies having an audit (not just large ones).[32]

3. Since smaller firms generate a greater proportion of their revenue from management advisory services (MAS) than do larger firms,[33] and since we have shown that practitioners in these smaller firms are more apt to perceive themselves to be "less independent," the profession should focus on devising methods by which MAS may be provided *without* impairment of independence. Barlev and Goldman note that since MAS has already become an integral part of auditors' activities, the question of whether MAS and public accounting services can be combined is no longer open.[34] The focus must be on ways of *ensuring* independence even though the practitioner engages in MAS. As we have shown, this may be an especially important issue for smaller firms. It is interesting to note that the Cohen Commission came to essentially similar conclusions in regard to MAS.[35]

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[30] Canadian Institute of Chartered Accountants Special Committee to Examine the Role of the Auditor, "Report of the Special Committee to Examine the Role of the Auditor," *CA Magazine* (April 1978): par. G13.

[31] Commission on Auditors' Responsibilities, *Report,* pp. 104-9.

[32] Ibid., pp. 107-8.

[33] Fred J. Lazar, J. Marc Sievers, and Daniel B. Thornton, *An Analysis of the Practice of Public Accounting in Ontario,* Working Paper No. 8, Professional Organizations Committee (Toronto: Ontario Legislature, 1978).

[34] Benzion Barlev and Arieh Goldman, "Management Advisory Services and Accounting," *ABACUS* (June 1974): 82.

[35] Commission on Auditors' Responsibility, *Report,* pp. 102-4.

Exhibit 15. Crosstabulation

"Sometimes, the nature of the organization, the objectives which the C.A. is expected to fulfill, and the personalities of the superior and/or colleagues of the C.A., cause him to use accounting principles in a way which is different from the way which is required or implied by the best professional judgement."

This description fits various situations in *your* work.

Count / Row % / Col % / Total %	CA Firm: Partner 1.	CA Firm: Employee 2.	Gov't. 3.	Mfg. 4.	Financial 5.	Retail 6.	Other 7.	Row Total
1.	143	53	42	30	12	43	22	345
Strongly	41.4	15.4	12.2	8.7	3.5	12.5	6.4	29.1
disagree	41.8	20.2	30.0	19.9	26.1	27.0	25.3	
	12.0	4.5	3.5	2.5	1.0	3.6	1.9	
2.	67	69	34	34	10	29	14	257
Moderately	26.1	26.8	13.2	13.2	3.9	11.3	5.4	21.7
disagree	19.6	26.8	24.3	22.5	21.7	18.2	16.1	
	5.6	5.8	2.9	2.9	0.8	2.4	1.2	
3.	32	31	9	11	4	10	7	104
Slightly	30.8	29.8	8.7	10.6	3.8	9.6	6.7	8.8
disagree	9.4	11.8	6.4	7.3	8.7	6.3	8.0	
	2.7	2.6	0.8	0.9	0.3	0.8	0.6	
4.	22	8	10	16	4	18	17	95
Neither	23.2	8.4	10.5	16.8	4.2	18.9	17.9	8.0
disagree nor	6.4	3.1	7.1	10.6	8.7	11.3	19.5	
agree	1.9	0.7	0.8	1.3	0.3	1.5	1.4	

EXHIBIT 15 (cont.)

Count Row % Col % Total %	CA Firm Partner 1.	 Employee 2.	Gov't. 3.	Mfg. 4.	Financial 5.	Retail 6.	Other 7.	Row Total
5.	63	68	29	36	6	41	19	262
Slightly	24.0	25.0	11.1	13.7	2.3	15.6	7.8	22.1
agree	18.4	25.0	20.7	23.8	13.0	25.8	21.8	
	5.3	5.7	2.4	3.0	0.5	3.5	1.6	
6.	10	22	16	19	9	17	2	95
Moderately	10.5	23.2	16.8	20.0	9.5	17.9	2.1	8.0
agree	2.9	8.4	11.4	12.6	19.6	10.7	2.3	
	0.8	1.9	1.3	1.6	0.8	1.4	0.2	
7.	5	11	0	5	1	1	6	29
Strongly	17.2	37.9	0.0	17.2	3.4	3.4	20.7	2.4
agree	1.5	4.2	0.0	3.3	2.2	0.6	6.9	
	0.4	0.9	0.0	0.4	0.1	0.1	0.5	
Column	342	262	140	151	46	159	87	1187
Total	28.8	22.1	11.8	12.7	3.9	13.4	7.3	100.0

Corporate Annual Reports: A Failure to Communicate

L. D. PARKER*

In the relatively short period of the last ten or twenty years, the international business community and the accounting profession have witnessed and indeed fostered a considerable degree of development of the corporate annual report to investors. During that time, the amount of detailed financial information, the quality of disclosure practices, and the standardization of reporting practices have been considerably improved, not only through the influence of government regulations and legal decisions, but also through the strenuous efforts of the accounting profession. As a result, the corporate annual report has grown to be a sizeable, if not formidable, document. While such a development must be welcomed by all those concerned with the evaluation of corporate performance in the open market economy, the proliferation of technical information provided within the corporate annual report has aggravated the long-standing problem of reader identification and reader usage of financial reports. While the accounting profession has not been unaware of the problem of identifying reader requirements, it has chosen by and large to view the problem from a distance and to discuss it only in a generalized fashion. Indeed, a perusal of accounting literature from the past decade is more than likely to convince the accounting researcher that accountants have almost by default presumed that, while the annual report may be distributed to all investors, in fact it is now only usefully being directed in emphasis toward the sophisticated professional reader.

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The corporate annual report's bypassing of the individual lay investor is no new observation. Since the early 1970s, many accounting and management writers have recognized the failure of the corporate annual report to communicate with the bulk of private investors. The accounting profession until recently, however, has continued to pay scant attention to this problem. This paper therefore attempts to emphasize again the seriousness of this reporting failure and to identify the magnitude of the problem as evidenced by more recent empirical studies.

THE PLIGHT OF THE PRIVATE INVESTOR

From within the financial statements housed in the corporate annual report, "the modest private shareholder can soon find a multitude of confusions and enigmas."[1] It is little wonder, therefore, that evidence of investor apathy toward the corporate annual report is not difficult to find. For instance, in 1967, the Australian company Gibson Kelite Industries Ltd. surveyed its shareholders to determine whether shareholders were satisfied with the contents of their annual report. Eight questions were asked in the survey form, and of 2,019 shareholders and 325 noteholders surveyed, only 204 replies were received. The effective response rate, after allowing for double counting, was therefore held to be 9.2 percent. Similarly, in the United States in 1971, a questionnaire was mailed to 2,500 investors to ascertain specific investor characteristics. In that case, only 990 replies were received, thus constituting a 40 percent response rate. In December 1974, a U.K. survey which involved the mailing of questionnaires to 1,594 individual shareholders yielded only 374 usable replies, thus consituting a mere 23 percent response rate.[2] It would appear, therefore, that the apathy of investors toward the corporate annual report has changed little over the past decade, regardless of the proliferation of accounting disclosure requirements being met by most corporations.

As long ago as 1971, Neilson and Lind conceptualized the lay investor as "Aunt Jane." Aunt Jane, they argued, was a reluctant audience who was constantly bombarded with a variety of compelling messages. Thus, they felt, the more heavy-footed or ponderous the communication, the less likely it was to win the battle for her attention

[1] R. Allen, "A Plea for Greater Clarity," *Accountancy* (March 1975): 48.
[2] J. K. Courtis, "Annual Reports: The Armchair or the Wastepaper-Bin?" *AFM Exploratory Series,* no. 5 (Armidale, Australia: University of New England, 1978), p. 2.

regardless of how vital the message might be.[3] The increasing complexity of annual report contents and disclosure requirements, when viewed in this perspective, might render Aunt Jane an even more reluctant audience to the annual report today. It should come as no surprise then that writers such as Jones[4] and Foy[5] have identified the source of this problem as being a disparity between two prime audiences for the annual report document — professionals such as the security analyst and the private investor. Indeed, Foy argues that the majority of corporate annual reports are really not written for the average investor but for market analysts and professional investors, and that the package in total is ostensibly aimed at the individual private investor. That package, however, does not reach him.

Very few writers who have dealt with this problem have paused to consider why, apart from the increasing amount of technical disclosure requirements, this problem should have arisen. Neilson and Lind have suggested four possible reasons why corporations do not try to reach the average investor:

1. The annual report is little more than a set of financial statements embroidered with a text and pictures for window-dressing;
2. Small investors are less sophisticated than the professional investor and therefore demand less in terms of information;
3. The annual report is seen as primarily an investor relations vehicle designed to appease security analysts; and
4. A basic technical format has been established for annual reports in general, and corporations are more concerned with meeting technical standards than with the ability of the annual report to communicate effectively to its intended audience.[6]

One further cause of this gap between the annual report and the private-investor sector of its audience has been raised by Randall.[7] He has pointed out that in fact the annual report is a multipurpose communication device which is used for a variety of purposes, such as an influence on the investment community, a community relations aid,

[3] W. C. Neilson and G. G. Lind, "Is Aunt Jane Worth It?" *Financial Executive* (January 1971): 51.
[4] D. P. Jones, "Management Freedom in Annual Reports," *Financial Executive* (August 1971): 24.
[5] F. C. Foy, "Annual Reports Don't Have to Be Dull," *Harvard Business Review* (January-February 1973): 49.
[6] Neilson and Lind, "Aunt Jane," p. 50.
[7] R. F. Randall, "Look What's Happened to Annual Reports," *Management Accounting* (April 1972): 62-63.

a sales medium to persuade shareholders to buy company products, a personnel recruitment material, and a means of publicizing the introduction of new products or making special points about a new field of endeavor. Certainly these uses represent only a partial list of the possible uses of the corporate annual report. They do serve to highlight, however, the problems of designing an annual report which communicates effectively with lay investors when it must be used also for many other purposes. Nevertheless, it would appear that all too often the lay investor has taken a "back seat" in the minds of accountants and managers responsible for the preparation of the corporate annual report.

WHERE DOES THE INDIVIDUAL INVESTOR TURN?

If the assertions as to the unsuitability of the corporate annual report for individual investor requirements are a realistic appraisal of the current state of affairs, then on what basis and from what sources do private investors secure information upon which to make decisions about their investment or disinvestment in corporate stocks? In November 1973, Baker and Haslem published the results of an empirical study which investigated this very question. In summary, their results were as follows:

Information Sources for Individual Investors[8]

Information source	Percent rated most important
Stockbrokers	46.8
Advisory services	15.6
Newspapers	11.3
Friends and/or relatives	9.7
Financial statements	7.9
Magazines	3.5
Tips and rumors	.4
Other (includes annual reports, prospectuses, and company management)	4.8
Total	100.0

[8] H. K. Baker and J. A. Haslem, "Information Needs of Individual Investors," *Journal of Accountancy* (November 1973): 64-69.

A similar study was published in Australia in 1976.[9] It produced somewhat similar results to the American study; the following summarizes these results:

Information Sources for Share Decision

(Percent rated most important)	
Friends, relatives	.03
Stockbrokers	.28
Advisory services	.07
Newspapers and magazines	
Financial statements	.30
Other (tips, rumors)	.15

From the combination of these study results, it would appear that neither corporate annual reports nor the financial statements within them comprise a dominant source of financial information about corporate performance as far as individual private investors are concerned. Indeed, it would seem that the annual report is being bypassed in favor of stockbrokers, investment advisory services, financial journals and newspapers, and even friends. It might therefore be safe to conclude not only that the private investor is generally apathetic toward the corporate annual report but also that he or she prefers to bypass it in favor of other sources of financial information. Intuitively, it might be suggested that this represents a response to the increased technical complexity of annual report contents. It is this question that this paper now addresses.

THE DISCLOSURE PROBLEM

The difficulty with which the more complex annual reports of today have encountered in meeting both the requirements of professional financial analysts and the comprehension needs of the average lay investor is probably best demonstrated by the results of the following two studies. In 1971, Singhvi and Desai published the results of their study of 100 listed and 55 unlisted corporations for fiscal years ending between April 1, 1965, and March 31, 1966. This survey was a selection of companies from the 500 largest U.S. industrial corporations in the *Fortune Directory* of 1965. An index of disclosure containing thirty-four items was constructed for the evaluation of quality of information

[9] R. Chenhall and R. Juchau, "Information Requirements of Australian Investors," *JASSA, the Journal of the Securities Institute of Australia,* no. 2 (1976): 8-13.

disclosed in the sample reports, and it was concluded that corporations which disclosed inadequate information were likely to be:

1. Small in total assets size;
2. Small in number of shareholders;
3. Free from listing requirements;
4. Audited by a small CPA firm;
5. Less profitable in terms of rate of return; and
6. Less profitable in terms of earnings margins.[10]

Hence, it would seem that when considering the effectiveness of annual report communication to the average investor, some distinctions may be required to be made between the types of firms making the disclosure. It must be admitted, however, that even if a large listed and profitable corporation were to satisfy those authors' thirty-four–item index, the effectiveness of that communication to the average investor might still be found to be wanting.

This observation is better illustrated by Buzby's 1974 survey of financial analysts. In this study, he selected thirty-eight items of information and obtained rankings as to their importance which were then compared with the extent of disclosure in the annual reports of eighty-eight small and medium-sized companies. He found that many items were inadequately disclosed in the sample and that the correlation between the analysts' importance ranking of items and the extent of corporate disclosure was small. Some of his findings are shown in the following table.[11]

Annual Report Ratings

Item of information	Financial analysts' weight (maximum)	Financial analysts' rank	Reporting firms' average score	Reporting firms' rank
Depreciation calculation methods and periods	3.71	6	2.71	16
Current and accumulated depreciation charges	3.57	11	3.57	1
Capital expenditures — coming year	3.50	12	.43	31
Deferred tax accounting	3.42	14	2.86	8
Price-level adjustments	2.90	28	0	37.5

[10] S. S. Singhvi and H. B. Desai, "An Empirical Analysis of the Quality of Corporate Financial Disclosure," *Accounting Review* (January 1971): 129-38.
[11] S. L. Buzby, "Selected Items of Information and Their Disclosure in Annual Reports," *Accounting Review* (July 1974): 423-35.

Annual Report Ratings (cont.)

Item of information	Financial analysts' weight (maximum)	Financial analysts' rank	Reporting firms' average score	Reporting firms' rank
Historical summary	3.77	3.5	2.41	18
Breakdown of income by product line, etc.	3.75	5	.28	33
Breakdown of sales by product line, etc.	3.67	8	.96	27
Categorization of tangible assets	3.19	23	2.98	3
Market value for marketable securities	2.62	33	2.52	2

What becomes evident from this type of study is that even where the corporate annual report is aimed at the rather narrower audience of professional financial analysts, corporate executives and accountants may still be misjudging their audience's information requirements.

Of course, in an attempt to improve the quality of corporate annual report disclosure, governmental regulatory bodies and the accounting profession have attempted to enforce and encourage improved disclosure through legislated requirements or professional standards and recommendations. Indeed these have proliferated particularly in the last decade. This regulatory approach to the problem of disclosure, however, has not necessarily brought about a complete consensus concerning the terminology and content of balance sheets and income statements. Probably this has arisen from the potentially conflicting desires for a degree of conformity without the invoking of a regimented straight jacket. Nevertheless, as Haried has pointed out, two major accounting communication problems still bedevil the accounting profession. They are the following:

1. Attempts to assign technical meanings to words that convey different meanings in ordinary usage or in other fields; and
2. Insufficient standardization of terms used in financial reports.[12]

Accordingly, the average lay investor still encounters an annual report which has some not inconsiderable difficulty in communicating. The problem has probably been most succinctly put by Jones as far back as 1971.

[12] A. H. Haried, "The Semantic Dimensions of Financial Statements," *Journal of Accounting Research* (Autumn 1972): 376.

> Recognising the average stockholder's unfamiliarity with accounting, I find it difficult to see how merely adhering to established accounting practice or imposing new and increasingly restrictive acounting standards will make for better understanding on the part of the layman. A readability gap exists. . . .[13]

The argument that standardization does not really help the lay investor, since it is not a substitute for clarity or effective communication, would certainly seem to be a convincing one.

THOSE FAILING FOOTNOTES

There is little doubt, from even the most cursory examination of a sample of today's corporate annual reports, that an increasing amount of financial information is being carried into the notes to the accounts. It is not an uncommon occurrence for a balance sheet and income statement to be accompanied by thirty or forty explanatory notes. They stand as a prime example of the increasing complexity of financial disclosure to the shareholder. The question remains, however, whether this increased effort on the part of the accounting profession is really worthwhile in terms of the comprehension of the private investor.

The failure of the notes to the accounts to communicate with the average investor has been well demonstrated in the first instance by Smith and Smith in 1971. Their study involved the application of two reading-ease formulae to notes to the accounts of the first 50 corporations on *Fortune's* list of 500 largest industrial companies for 1969. In brief, the study concluded that:

1. Notes to financial statements were understandable only to a limited audience;
2. Both readability formulae used produced comparable results; and
3. Only 19.3 percent of the population in the United States at the time of the study had achieved the required educational standard to comprehend the notes for the 50 companies studied.[14]

These results were further confirmed by a study published in New Zealand in 1977. In that study, Healy selected twenty-nine of the largest companies listed on the New Zealand Stock Exchange No. 1 Board and the twenty-one largest companies listed on the New Zealand Stock Exchange No. 2 Board as of the 1976 balance date. He applied the Flesch reading-ease formula (being one of those used in the 1971

[13] Jones, "Management Freedom," p. 24.

[14] J. E. Smith and N. P. Smith, "Readability: A Measure of the Performance of the Communication Function of Financial Reporting," *Accounting Review* (July 1971): 552-61.

U.S. study) to that sample of companies' notes to the accounts. In summary, Healy found that:

1. The footnotes to New Zealand financial statements were understandable to only 20 percent of the general population;
2. Large companies tended to present less readable footnotes than small companies; and
3. The footnotes to financial statements of winners of the annual New Zealand award for best annual report were no more readable than footnotes to other corporate reports.[15]

It is therefore fairly clear that the "readability gap" identified by Jones[16] is still very much in evidence, at least in the notes to financial statements contained within the corporate annual report.

FINANCIAL REPORTS AND PRIVATE INVESTORS

The evidence for the "readability gap" does not rest simply with empirical studies of readability of notes to the accounts. In recent years, a number of studies have been made of private-investor usage and comprehension of published financial statements. In 1973, Foy reported on the results of a survey of report-reading habits of stockholders and security analysts conducted by Georgeson and Co., an investor relations firm. Those findings are given briefly here:

Stockholders

40% surveyed read reports for five minutes or less;
15% surveyed did not read reports at all; and
26% surveyed read the report for between six and fifteen minutes on average.

Analysts

60% surveyed on average read a report for longer than one hour; and
8% surveyed on average read a report for less than thirty minutes.[17]

Such results again uncover a marked difference in attention paid to the corporate annual report contents (particularly the technical section) between professional financial analysts and the average lay shareholder.

These findings are much more convincingly supported by a rather detailed study conducted by Lee and Tweedie, the results of which were

[15] P. Healy, "Can You Understand the Footnotes to Financial Statements?" *Accountants' Journal* (New Zealand) (July 1977): 219-22.
[16] Jones, "Management Freedom," p. 24.
[17] Foy, "Annual Reports," pp. 49-50.

reported in *Accounting and Business Research* (U.K.) in 1975.[18] Their study produced detailed statistics as to shareholders' views on the importance of elements in the annual report, information in annual financial reports found to be useful by shareholders when making investment decisions, use made by shareholders of other sources of financial information about companies, shareholders' rankings of importance of other sources of financial information about companies, details of the background of shareholders' study, and comprehension of valuation principles, reporting responsibility, the nature of reports, and reporting objectives. In general, they found that many shareholders appeared to skim the annual report. The chairman's report emerged as the most widely read element. Shareholders with some accounting knowledge appeared to read reports more carefully than those without any accounting background who tended to be more interested in the chairman's report in preference to other sections. Financial press reports were rated by shareholders as being even more useful in investment decision making than the published profit-and-loss account. And, indeed, financial press reports were considered to be the most important of sources of information outside the annual financial report.

Lee and Tweedie went beyond evaluating the usage of annual report information by the average private shareholder and attempted to evaluate the levels of comprehension of the information contained therein. This research led them to conclude that while over two-thirds of shareholders replying to the survey stated that they understood accounting information, survey tests of various aspects of the reporting process revealed that shareholders' actual knowledge was considerably less than their own perception of their comprehension ability. Less than half the shareholders surveyed knew the usual method of valuing plant and machinery in the financial statements, knew where responsibility for financial statements lay, or knew the approximate nature of accounting income and values. It is interesting to note that the researchers found that even accounting education or experience did not necessarily guarantee a knowledge of reporting practice. Approximately 90 percent of respondents who had some financial background, experience, or training claimed to understand reported accounting information, and yet their

[18] T. A. Lee and D. P. Tweedie, "Accounting Information: An Investigation of Private Shareholder Usage," *Accounting and Business Research* (Autumn 1975): 280-91; and idem., "Accounting Information: An Investigation of Private Shareholder Understanding," *Accounting and Business Research* (Winter 1975): 3-13.

responses to the survey revealed that about 50 percent of them had a poor understanding of reporting practice.

In pausing at this point to look over the mounting evidence concerning private shareholder behavior in relation to the corporate annual report presented here, it becomes increasingly clear that the "readability gap" contains elements of shareholder apathy, poor shareholder comprehension of increasingly complex financial disclosure practices, and continuing low levels of usage of the corporate annual report by the private shareholder.

A New Zealand study, similar to the U.K. study discussed here, was conducted by Wilton and Tabb; its findings were published in 1978. The authors found that only 4.8 percent of shareholders surveyed read thoroughly all sections of the company's annual financial report. Again, consistent with other survey results, the researchers found that while the profit-and-loss account was rated the most important aspect of the company's annual financial report for decision making, the unsophisticated user category tended to rely more on the chairman's report for such guidance. Some particular statistics concerning the degree to which aspects of annual reports are studied by private shareholders emerged from this study. The auditor's report was read thoroughly by only 11.5 percent of survey respondents and not read at all by 48.5 percent of respondents. The balance sheet was read thoroughly by only 40.6 percent of respondents, and the profit-and-loss account was read thoroughly by only 48.5 percent of respondents. It is even more interesting to observe that the notes to the accounts which accompany the profit-and loss-account and the balance sheet were read thoroughly by only 22.4 percent of respondents.[19] Given that much more information has been siphoned into the notes to the accounts in recent years, it is also interesting that the particularly low level of readership of the notes is virtually half of the readership level of the actual profit-and-loss account or balance sheet.

Yet another study concerning shareholder opinion of published financial statements was conducted by Winfield. The findings of this Australian study were published in 1978. Winfield concluded that while approximately 70 percent of shareholders studied read the financial statements to some degree, most found the directors' report more in-

[19] R. L. Wilton and J. B. Tabb, "An Investigation into Private Shareholder Usage of Financial Statements in New Zealand," *Accounting Education* (May 1978): 93-101.

formative.[20] Again, consistent with the findings of the Lee and Tweedie study in the United Kingdom, Winfield found that shareholders' perceptions of their understanding of accounting information were optimistic. Approximately 80 percent claimed at least some understanding, but little more than half of that number passed a comprehension test submitted to them. It is interesting that one third of respondents to that study expressed a preference for simpler financial statements, and yet many of them also expressed a preference for additional items of information. Certainly this study again uncovered a tendency for less financially experienced shareholders to rely on directors' reports and financial press reports in making their investment decisions.

While the overview of these study results has been necessarily brief, it serves to point out quite clearly that the assertions of accounting writers at the beginning of the 1970s have been fairly convincingly supported by a range of empirical studies conducted during this decade.

THE PRIVATE INVESTOR AND THE ACCOUNTING PROFESSION

To many professional accountants, the state of affairs outlined in this paper is likely to come as little surprise. Accountants have not been so lacking in sensitivity that they have not observed the trend in corporate annual reporting toward informing the sophisticated professional financial analyst about financial dimensions of corporate activities in increasing detail. Equally, most accountants appear likely to have accepted the fact that the corporate annual report has become less and less suitable for unsophisticated private-investor readership. This in itself represents the crux of the corporate reporting problem.

It would certainly appear from the proliferation of regulatory-body pronouncements, and professional accounting bodies' discussion documents, exposure drafts, and statements of standard practice that the accounting profession has, at least by default and certainly by its encouraging disclosure of increasingly complex detail in annual reports, accepted the professional investor and financial analyst as its prime reporting audience. It appears unlikely that the accounting profession's diminished interest in the needs of the average private investor has been a deliberate choice but that his or her interests have been increasingly forgotten in the attempt to render corporate annual report financial disclosure more complete and more all-encompassing for the

[20] R. R. Winfield, "Shareholder Opinion of Published Financial Statements," in *Corporate Annual Report Analysis, AFM Exploratory Series,* no. 5, ed. J. Courtis (Armidale, Australia: University of New England, 1978), pp. 176-94.

purposes of sophisticated corporate performance evaluation. While the requirements of sophisticated financial analysis and lay investor comprehension would certainly appear to be in conflict, the accounting profession appears to have avoided any significant attempt thus far to find a compromise solution by apparently making a fairly pragmatic choice in favor of the sophisticated corporate report user.

The problem remains, however, that neither legislation nor professional accounting body statements explicitly condone the abandonment of the average investor's requirements in favor of security analysts and professional investors. How can the accounting profession react to this situation? It might choose to admit publicly that it is concentrating its reporting effort toward the sophisticated audience. However, it would seem likely that it would encounter some significant political reaction stimulated by special interest lobby groups, the general public electorate, and interested politicians, should the general public's attention be suddenly brought to the current state of affairs which has evolved over a number of years. On the other hand, the profession could opt for the status quo in which the present situation would be allowed to continue. This effectively means that the lay investor would continue to be largely ignored, since the situation has taken so long to evolve, and would remain largely unnoticed and therefore largely unprotested. The danger always remains, however, that public attention may eventually be directed toward this situation through company failures, investors' concern over the expense of annual report production, or the attention of special interest groups. The accounting profession may then find itself accused of a more serious action than merely neglect.

A third alternative is that the accounting profession could opt to confront the "readability gap" problem and investigate the means available for moving at least some distance toward improving the private investor's lot. A proper discussion of what those means may be lies beyond the scope of this paper. However, it would seem, at least in the first instance, that financial statement simplification for lay-investor consumption must rank high on the profession's list of priorities for discussion. The possible use of more narrative material may also warrant consideration. Such developments might then be incorporated into annual reports in the form of highlight material designed expressly for private-investor consumption, or alternatively corporations might be induced to consider the preparation of a two-part report in which one part provides detailed technical information for the sophisticated audience while the other part provides a simplified highlight presentation for the private investor.

It can be argued that sooner or later, the accounting profession will be compelled to confront this "readability gap" by such approaches as the provision of highlight statements or financial statement simplification. Certainly the moves in the United Kingdom and Australia toward simplified financial reports for corporate employees[21] would indicate that the attention of both corporate management and accounting professionals is taking this direction. At this point, however, after a decade or more of significant developments in corporate annual report practice, the further development of the annual report may prove to be of critical interest to the private investor or of no interest at all.

[21] For further discussions of this development, refer to L. D. Parker, "The Reporting of Company Financial Results to Employees," *Research Committee Occasional Paper No. 12* (London: Institute of Chartered Accountants in England and Wales, September 1977), pp. 85; idem, "Financial Reporting to Corporate Employees — a Growing Practice in Australia," *Chartered Accountant in Australia* (March 1977): 5-9; and idem, "The Accounting Responsibility Towards Corporate Financial Reporting to Employees," *Accounting Education, Journal of the Accounting Association of Australia and New Zealand* (November 1977): 62-83.

Transfer Pricing for the Multinational Corporation

RICK ELAM and HAMID HENAIDY*

When a company is engaged solely in exporting, its pricing task is normally limited to the setting of export prices and terms at which goods are sold to customers outside the firm. When the company expands its involvement beyond exporting and begins to establish foreign subsidiaries, the matter of intracompany transfer prices becomes an important and complex dimension of pricing strategies. Transfer pricing in a multinational context usually refers to the price paid for goods (at varying stages of production) and services from one economic unit to another, assuming that the two units involved are situated in different countries but belonging to the same multinational firm. The economic unit represents either the headquarters or a subsidiary. Multinational transfer pricing includes not only the sale of tangible property ranging from raw materials to intermediate and finished goods, but also the pricing of money (loans), services (research and development, consulting, managerial assistance), the use of tangible property (equipment, buildings), and the transfer or use of intangible property (patents, copyrights, trademarks, procedures, forecasts, estimates, customer lists).

While many accounting and business studies have dealt with resource allocation and transfer-pricing problems separately, few have

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treated the two topics together in a mathematical context where the transfer prices have been decision variables.[1]

The first purpose of this study is to demonstrate the relationship between the problems of transfer pricing and resource allocation and to develop a mathematical model considering the critical environmental aspects, especially taxes and duties, which directly affect the setting of transfer prices in a profit-maximizing multinational firm. This model should not be confused with the transfer-price problem solved using the well-known techniques of decomposition or linear programming, which in the past normally disregarded factors such as taxes and duties. This study considers transfer prices as real decision variables in order to maximize the multinational firm's net profits through optimal transfer pricing and resource allocation decisions.

In addition, this study examines the applicability of the proposed model. A case study of an actual multinational corporation is presented. An application of the model also demonstrates how well decisions can be improved by implementing the proposed approach.

BACKGROUND OF THE PROBLEM

There are essentially four methods of international transfer pricing that can be used singly or in combination, depending upon such diverse factors as the firm's product line, its organizational structure, and the scope of its foreign operations. These four methods are (1) transfers at arm's length or established market prices to independent customers, (2) transfers at negotiated prices between corporate units, (3) transfers at local manufacturing cost plus a standard markup, and (4) transfers at the local manufacturing cost of the most efficient corporate unit plus a standard markup.[2]

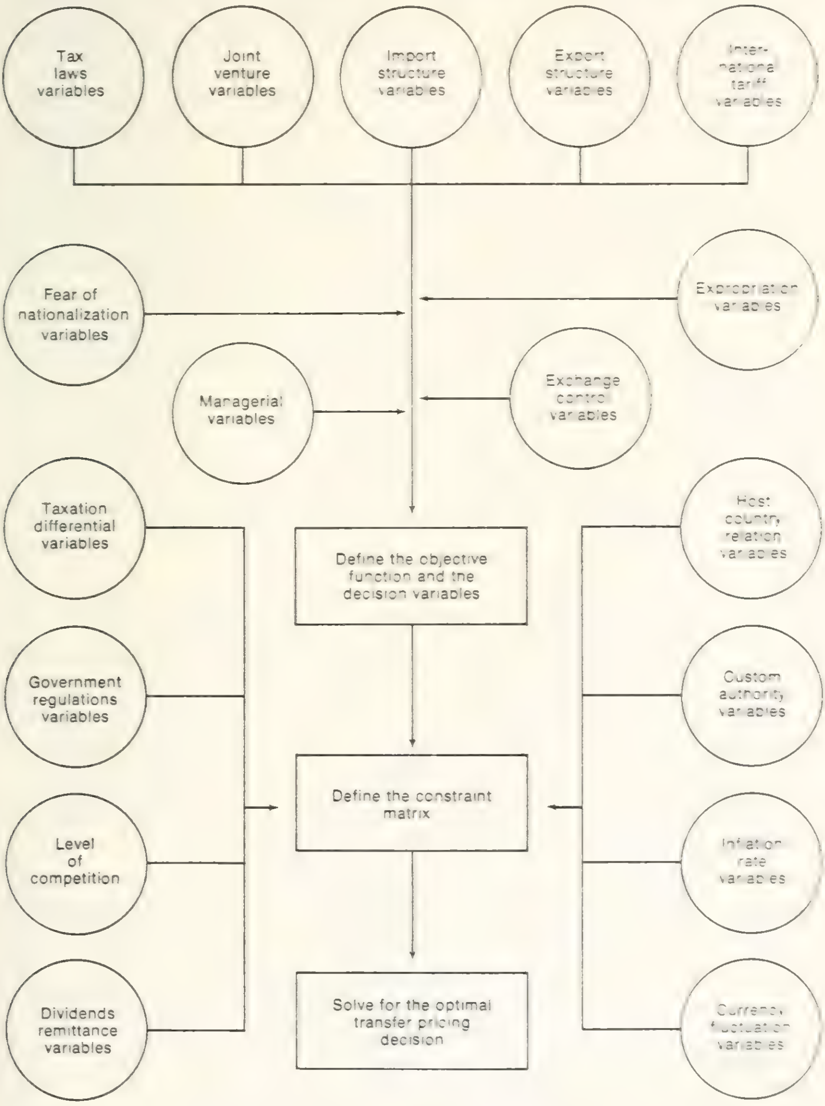
The value of a transfer price is not irrelevant to the firm as a whole but has direct effects on the total net profits. Furthermore, the transfer prices cannot be regarded in isolation but must be determined simul-

[1] See, for example, R. Burton, W. Damon, and D. Loughridge, "The Economics of Decomposition: Resource Allocation vs. Transfer Pricing," *Decision Sciences* (July 1974): 297-310; N. Dopuch and D. Drake, "Accounting Implications of a Mathematical Programming Approach to the Transfer Price Problem," *Journal of Accounting Research* (Spring 1964):10-24; J. Hass, "Transfer Pricing in a Decentralized Firm," *Management Science* (February 1968): B310-33; and C. Kanodia, "Risk Sharing and Transfer Price Systems under Uncertainty," *Journal of Accounting Research* (Spring 1979); 74-97.

[2] Business International Corporation, *Solving International Pricing Problems* (New York: Business International Corporation, 1965), p. 18.

taneously with the allocation of resources between economic units. Exhibit 1 presents a schematic view of the critical variables influencing the multinational firm's transfer-pricing strategy.

Exhibit 1. The Critical Variables Influencing the Multinational Firm's Transfer-Pricing Strategy



The application of the linear programming approach for solving the transfer-pricing problem in this study is an extension of the approach proposed by Petty in 1971 and 1978.[3] While Petty identified the key determinants of international transfer pricing, he failed to suggest an operational method of implementing the basic model which he developed in his research. One difference between the approach of this study and that of Petty is that this study uses different assumptions and has different purposes. Petty was more concerned with (1) identification of the relevant parameters for an international transfer-pricing construct, and (2) the employment of linear programming to develop a model which (a) gives due recognition to the critical environmental factors, and (b) provides a meaningful analysis of the interaction between these parameters.[4] The emphasis of this study is on constructing a mathematical model for a multinational firm faced with a resource allocation problem involving duties, taxes, and the determination of transfer prices. In addition to the linear programming technique, this study uses several nonlinear constraints, including both transfer prices and resource allocation as decision variables. The model formulation, data collection, and application of the model are the focus of this study. Another important difference with Petty's approach is that this study examines the applicability of the proposed model by applying it to an actual multinational firm. The mathematical formulation of the resource allocation and transfer-pricing model appears in the appendix.

DESCRIPTION OF THE FIRM

The subject firm in this study is a U.S.-based multinational corporation in the construction and mining equipment industry. Through its subsidiaries, the firm manufactures and markets products used mainly in general construction, maintenance of roads and highways, coal production, and other mining activities. This firm was selected on the basis of its asset size, number of foreign subsidiaries, and volume (units) of transferred products. Cooperation of the firm in supplying the necessary data was predicated on assurance of complete anonymity.

The subject firm is comprised of nine subsidiaries located in various foreign countries. The application of the model discussed here was limited to the three large subsidiaries located in Australia, Canada, and

[3] John W. Petty, "An Optimal Transfer-Pricing System for the Multinational Firm: A Linear-Programming Approach" (Ph.D. dissertation, University of Texas at Austin, 1971); and Larry J. Merville and John W. Petty, "Transfer Pricing for the Multinational Firm," *Accounting Review* (October 1978): 935-51.

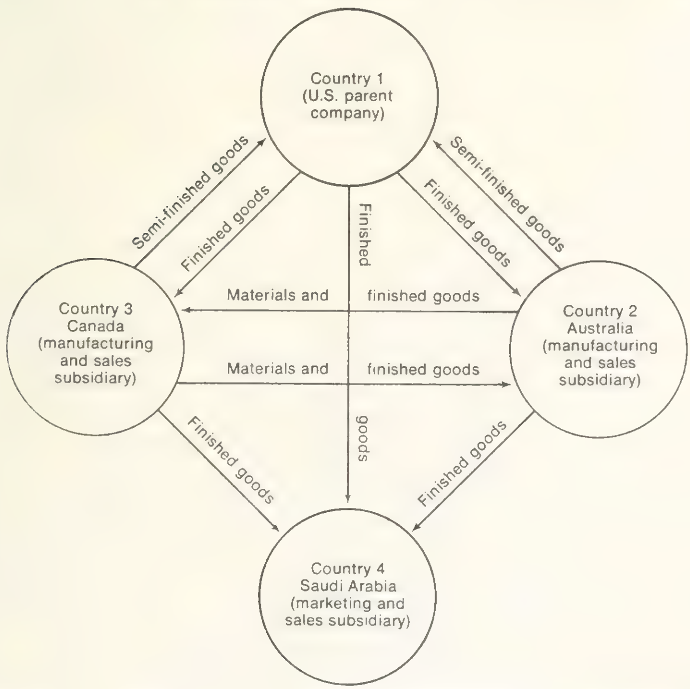
[4] Petty, "Transfer-Pricing System," p. 8.

Saudi Arabia, respectively. This limitation was made on the basis that those largest three subsidiaries are responsible for most of the transfer sales within the subject firm. The largest two subsidiaries (Australia and Canada) are both manufacturing and sales organizations while the third (Saudi Arabia) is only a sales and marketing organization (see exhibit 2).

Sales revenues of the firm increased steadily during the years 1976 to 78 from approximately $334 million in fiscal 1976 to $567 million in fiscal 1978. This growth was a continuation of the more than twenty years of increasing sales and product expansion. In 1978, foreign sales of the firm amounted to $223 million, or 41 percent of total sales revenues of the firm.

Each subsidiary of the firm has its own management and operates with relative independence. Within each subsidiary, the individual divisions are operated as independent profit centers reporting to the sub-

Exhibit 2. Transferred Products' Flows in the Subject Multinational Firm



sidiary management. Each subsidiary reports to the top management in the central headquarters.

The main economic activities of the firm start with the purchase of raw material or parts and assemblies from external manufactures (not owned by the firm). These purchases are made centrally in the American headquarters, and most of the raw material arriving is stored in centrally located warehouses. The purchase of raw materials and semifinished goods is an important activity of the subject firm, since the purchase costs represent a large proportion (estimated from 45 to 55 percent) of the total costs. These raw materials and semifinished products are allocated from the central warehouses to the manufacturing plants in the United States and in other foreign countries. Raw materials are sold first by the central headquarters to the manufacturing subsidiaries (at cost) and are then bought back as finished goods for a transfer price which includes a profit for the manufacturing subsidiary. In other cases, finished goods are sold by manufacturing subsidiaries to marketing subsidiaries (such as Saudi Arabia). The prices in the latter case are the transfer prices this study is interested in determining. The allocation of finished products to the sales subsidiaries is made by the headquarters, based on information regarding expected sales of the marketing subsidiaries and the supply of finished goods. The marketing subsidiaries sell finished products to outside customers for a price which was given in advance and independent of volume at the time of planning.

Transfer prices in the subject firm are calculated by the central headquarters using one or more of the following two methods:

1. Negotiated transfer prices: this method is used when there is no outside competitive market for the firm's products. In fact, negotiated transfer prices are usually established arbitrarily by top management using the same prices as quoted to outside customers of the firm. Therefore, they are not satisfactory measures of performance.
2. Cost plus basis: transfer prices are calculated here as the sum of the variable costs plus a standard markup. In this case, top management requires the buyer-subsidiaries to make month-to-month purchasing decisions based on the variable costs of the supplier-subsidiaries plus a separate predetermined charge for profit (markup). This latter charge is made monthly by the central headquarters. According to the views of some members of the subject firm, transfer prices based on variable cost-plus enabled top management to determine the size of divisional profits, and also assisted in implementing a pricing policy for the final products.

For this study, the application of the model was limited to only those costs and decision variables directly related to the manufacturing and selling of transferred products. Since the number of products manufactured by the firm was quite large, the model was limited to only two original transferred products. This decision, in effect, implies that those products eliminated are being treated as noncontrollable variables with fixed resource utilization.

The principal purpose of the model is the maximization of total net profits of the multinational firm in the short run through optimal transfer-pricing decisions. To attain these objectives, the model ideally should include all of the variables influencing the multinational firm's transfer-pricing decisions. Several of these variables, such as the fear of nationalization or governmental regulations, are nonquantifiable. Other quantifiable variables were excluded from the model because the information necessary for their construction was not available. For example, although the inflation and currency-exchange rates are published for some countries, the lack of specific information on each foreign subsidiary of the subject firm precluded use of these variables. Specifically, the significant factors included in the model are international tariff and tax rate differentials and other costs such as manufacturing and transportation costs which directly affect the setting of the transfer-pricing strategy.

APPLICATION OF THE MODEL

For the purpose of application, the objective function and the constraint equations for the subject firm are fully specified in this section. In the model applied here, there are two products, Product A and Product B, which are transferred among four different countries, where

Country 1 = the U.S. parent organization;
Country 2 = the largest subsidiary — Australia;
Country 3 = the second largest subsidiary — Canada; and
Country 4 = the third largest subsidiary — Saudi Arabia.

The following formulation is based on the structure of the model presented in the appendix and on the data provided by the subject firm. The objective function:

$$\begin{aligned}\text{Maximize } Z = {} & .50P_{1a} - L_{1a} + .50P_{1b} + L_{1b} + .54P_{2a} - L_{2a} + .54P_{2b} \\ & - L_{2b} + .52P_{3a} - L_{3a} + .52P_{3b} - L_{3b} + .75P_{4a} - L_{4a} \\ & + .75P_{4b} - L_{4b}\end{aligned}$$

(worldwide net profit in all manufacturing and sales subsidiaries adjusted to the effects of taxes)

Subject to the constraints:

Plant Capacity Constraints at Manufacturing Subsidiaries

$X_{11a} + X_{12a} + X_{13a} + X_{14a} \leq 290{,}000$ (U.S. plant capacity; Product A)

$X_{11b} + X_{12b} + X_{13b} + X_{14a} \leq 160{,}000$ (U.S. plant capacity; Product B)

where X_{ij} is the quantity of units transferred from i to j. For example, X_{11a} = quantity of Product A manufactured in Country 1 (the United States) and sold in the same country. And, X_{12a} = quantity of Product A manufactured in Country 1 (the United States) and transferred to Country 2 (Australia), and so on.

$X_{22a} + X_{24a} \leq 100{,}000$ (Australia plant capacity; Product 2A)
$X_{22b} + X_{24b} \leq 20{,}000$ (Australia plant capacity; Product B)
$X_{33a} + X_{34a} \leq 85{,}000$ (Canada plant capacity; Product A)
$X_{33b} + X_{34b} \leq 55{,}000$ (Canada plant capacity; Product B)

Demand Constraints at Sales Subsidiaries

$X_{11a} \leq 100{,}000$ (U.S. demand; Product A)
$X_{11b} \leq 100{,}000$ (U.S. demand; Product B)
$X_{12a} + X_{22a} \leq 75{,}000$ (Australia demand; Product A)
$X_{12b} + X_{22b} \leq 30{,}000$ (Australia demand; Product B)
$X_{13a} + X_{33a} \leq 90{,}000$ (Canada demand; Product A)
$X_{13b} + X_{33b} \leq 60{,}000$ (Canada demand; Product B)
$X_{14a} + X_{24a} + X_{34a} \leq 210{,}000$ (Saudi Arabia demand; Product A)
$X_{14b} + X_{24b} + X_{34b} \leq 40{,}000$ (Saudi Arabia demand; Product B)

where P_i and P_j (profit variables), L_i and L_j (loss variables) for all manufacturing and sales subsidiaries are defined by the equations:

U.S. Product A

$$\begin{aligned} P_{1a} - L_{1a} = {} & X_{11a} \cdot 75 + X_{12a} \cdot 150 + X_{13a} \cdot 120 + X_{14a} \\ & \cdot 100 - 37.5 \cdot X_{11a} - 45 \cdot X_{12a} - 41.5 \\ & \cdot X_{13a} - 48.5 \cdot X_{14a} = 37.5X_{11a} + 105X_{12a} \\ & + 78.5X_{13a} + 51.5X_{14a} - P_{1a} + L_{1a} = 0 \end{aligned}$$

[transferred quantity (X_{1ja}) from the United States to other subsidiaries, multiplied by the actual transfer prices minus manufacturing and transportation costs].

U.S. Product B

$$P_{1b} - L_{1b} = X_{11} \cdot 65 + X_{12b} \cdot 130 + X_{13b} \cdot 100 + X_{14b} \cdot 90 - 32.5X_{11b} - 38.5X_{12b} - 35X_{13b} - 40.5X_{14b} = 32.5X_{11b} + 91.5X_{12b} + 65X_{13b} + 49.5X_{14b}$$

[transferred quantity (X_{1jb}) from the United States to other subsidiaries minus manufacturing and transportation costs, multiplied by the actual transfer prices].

Australia Product A

$$P_{2a} - L_{2a} = X_{22a} \cdot 171 + 171X_{12a} + 110 \cdot X_{24a} - 27.5 \cdot X_{22a} - 35.5 \cdot X_{24a} - (1 + .10)X_{12a} \cdot 150 = 143.5X_{22a} + 75.5X_{24a} + 6X_{12a}$$

[transferred quantity from (X_{2ja}) and to (X_{i2a}) Australia adjusted with duties, multiplied by the actual transfer prices minus manufacturing and transportation costs].

Australia Product B

$$P_{2b} - L_{2b} = 148 \cdot X_{22b} + 148 \cdot X_{12b} + 90 \cdot X_{24b} - 22.5 \cdot X_{22b} - 29 \cdot X_{24b} - (1 + .10)X_{12b} \cdot 130 = 125.5X_{22b} + 5X_{12b} + 61X_{24b}$$

[transferred quantity from (X_{2jb}) and to (X_{i2b}) Australia adjusted with duties, multiplied by the actual transfer prices minus manufacturing and transportation costs].

Canada Product A

$$P_{3a} - L_{3a} = X_{33a} \cdot 137 + 137 \cdot X_{12a} + 120 \cdot X_{34a} - 30 \cdot X_{33a} - 39 \cdot X_{34a} - (1 + .20)X_{13a} \cdot 120 = 107X_{33a} + 81 \cdot X_{34a} - 7X_{13a}$$

Canada Product B

$$P_{3b} - L_{3b} = 119 \cdot X_{33b} + 119 \cdot X_{13b} + 105 \cdot X_{34b} - 26.25 \cdot X_{33b} - 33.25 \cdot X_{34b} - (1 + .20)X_{13b} \cdot 100 = 92.75 \cdot X_{33b} + 71.75 \cdot X_{34b} - 1 \cdot X_{13b}$$

Saudi Arabia Product A

$$P_{4a} - L_{4a} = X_{14a} \cdot 135 + X_{24a} \cdot 135 + X_{34a} \cdot 135 - X_{14a} \cdot 100 - (1 + .15)X_{24a} \cdot 110 - (1 + .15)X_{34a} \cdot 120 = 20 \cdot X_{14a} + 8.5 \cdot X_{24a} - 3X_{34a}$$

Saudi Arabia Product B

$$P_{4b} - L_{4b} = X_{14b} \cdot 117 + X_{24b} \cdot 117 + X_{34b} \cdot 117 - X_{14b} \cdot 90$$
$$- (1 + .15) X_{24b} \cdot 90 - X_{34b} \cdot 105(1 + .15)$$
$$= 13.5X_{14b} + 13.5X_{24b} - 3.75X_{34b}$$

Transfer-price constraints:

$n_{ij} \leq w_{ij} \leq u_{ij}$ for all i and j

where n_{ij} and u_{ij} (both ≥ 0) are the lower and upper bound on the transfer price (w_{ij}).

The non-negativity constraints:

x_{ij}, w_{ij}, P_i, P_j, L_i and L_j are greater than or equal to zero for all i and j (where x_{ij} and w_{ij} are variables and the remaining symbols are given constants).

The firm now decides

1. The optimal transfer prices (w_{ij}) which should be used between the sending and receiving subsidiaries for each Product A and B.
2. The optimal resource allocations (X_{ij}) which represent the quantities for each Product A and B manufactured in a certain subsidiary and sold to another subsidiary.

The objective of the firm is to maximize worldwide net profits during the planning period, subject to production capacity at manufacturing subsidiaries, minimum and maximum demand at the sales subsidiaries, upper and lower bounds on the transfer prices, and other constraints.

RESULTS OF THE APPLICATION

The problems of transfer pricing and resource allocation for the subject firm were solved using the IBM Mathematical Programming System Extended/370 (MPSX/370). In addition to solving linear programming problems, this program package also permits the user to solve problems containing nonlinear constraints within a linear programming framework.[5]

To demonstrate the model's use, five separate runs were made, each having different assumptions. The first run which is completely linear assumes fixed transfer prices. These prices were taken from the transfer-

[5] IBM Mathematical Programming System Extended/370 (MPSX/370), Program Reference Manual (SH19-1095-2), 3rd ed. (New York: IBM, January 1978).

price lists actually used by the subject firm during the period considered. Runs 2 to 4 permitted the transfer prices to vary within a range, between a lower and an upper bound given in advance. The bounds were calculated as a certain percentage of the actual transfer prices used in the first run. Run 5 was made to get an upper bound of the objective function by excluding all taxes and setting the transfer prices to the lower bounds. The objective function in each run was the same: the maximization of the worldwide profits after taxes. The following is a detailed description of each run.

Run 1

The purpose of run 1 is to determine the optimal resource allocation (quantity of transferred products) assuming fixed transfer prices. This run gives a solution to the problem when the transfer prices were fixed to the prices actually used during the planning period. The results of run 1 were used as a standard with which the other computer runs were compared.

In this run (run 1), the constraint equations were those setting maximum demand and production capacity, and those defining profit and loss (before taxes). The decision variables were the quantities to be allocated from manufacturing countries (the United States, Australia, and Canada) to the selling countries (all four), with the only transfers allowed being the United States — Australia, the United States — Canada, the United States — Saudi Arabia, Australia — Saudi Arabia, and Canada — Saudi Arabia.

Exhibit 3 summarizes the results of run 1. As shown in this table, some allocations are zero; those that are not were used to find the results of varying transfer prices in the subsequent runs. The solution to run 1 should in some sense be similar to the actual outcome for the planning period concerned. However, run 1 differs from reality in having an optimal resource allocation. This run can be used theoretically for comparing the effects of varying the transfer prices within various bounds. It is apparent that total profits increase with every unit sold, so that the limit on profits will be either the maximum demand constraints or the capacity constraints. In this first run, the only slack is in the U.S. capacity constraints for Product B; there is no slack in the other capacity constraints or demand constraints.

Exhibit 3. Summary of Run 1 Results

Run 1: Optimal resource allocation, where transfer prices are fixed.

		Sellers (in 1,000s of units)				
Manufacturers	*Product*	*U.S.*	*Australia*	*Canada*	*Saudi Arabia*	*Capacity totals*
United States	A	100	0	5	185	290
	B	100	10	5	40	155
Australia	A		75		25	100
	B		20		0	20
Canada	A			85	0	85
	B			55	0	55
Demand totals	A	100	75	90	210	
	B	100	30	60	40	

Profits before taxes (in $1,000s)

	Product A	Product B
United States	$13,670	$6,470
Australia	12,625	2,560
Canada	9,060	5,096
Saudi Arabia	3,912	540

Total corporate profit, after taxes: $28,970,524

Runs 2, 3, and 4

In these three runs, a sensitivity analysis has been made to show the effects of varying the bounds on transfer prices.[6] The bounds are calculated as a certain percentage of the transfer prices actually used. In run 2, for example, the lower bound is 95 percent of the transfer price actually used. The upper bound is 105 percent of the same price. Consequently, the permitted range for the transfer prices to vary is 5 percent up and down compared to the transfer prices actually used. From run 3 to run 4, the range is expanded to ±10 and ±15. These lower and upper bounds on transfer prices were estimated by representatives of the subject firm, who considered these bounds to be a fair approximation of reality. In a real application, the transfer-price bounds should be selected individually, but in this case they are set on a percentage basis for simplicity.

[6] For a detailed discussion on sensitivity analysis application, see Alfred Rappaport, "Sensitivity Analysis in Decision Making," *Accounting Review* (July 1967): 441-56; and Charles T. Horngren, *Cost Accounting: A Managerial Emphasis* (Englewood Cliffs, N.J.: Prentice-Hall, 1977), pp. 386-87.

In these three runs, the constraints were those that defined profit and loss before taxes. The decision variables were the optimal transfer prices to be used between the sending and receiving subsidiaries for the two products, A and B. The optimal resource allocations were those determined from run 1; demand and capacity constraints did not apply in these three runs since allocations were fixed.

Exhibit 4 summarizes the results of run 2 through run 4. The optimal transfer prices in each run are found to exist at their lower bound. Decreasing transfer prices increases total profit, because in every case manufacturing subsidiaries are taxed at higher rates than selling subsidiaries. Thus, a decrease of, for example, $1.00 in the U.S. transfer price to Canada will decrease the U.S. profit by 50¢ after taxes, but will increase Canada's profit by 52¢ after taxes. This means a net increase in the objective function of 2¢ per unit transferred from the United States to Canada. This relationship holds for every transfer, so that the lower

Exhibit 4. Summary of Runs 2, 3, 4 Results

Runs 2, 3, 4: Using fixed allocations from run 1, determine optimal transfer prices, allowing transfer prices to vary ±5%, ±10%, and ±15%.

		Optimal transfer prices		
Manufacturer-seller	*Product*	*Run 2, ±5%*	*Run 3, ±10%*	*Run 4, ±15%*
United States-Canada	A	$ 114	$ 108	$ 102
	B	95	90	85
United States-Saudi Arabia	A	95	90	85
	B	85.5	81	76.5
United States-Australia	B	123.5	117	110.5
Australia-Saudi Arabia	A	104.5	99	93.5
Profits before taxes ($1,000s)				
United States	A	$12,715	$11,760	$10,805
	B	6,200	5,930	5,660
Australia	A	12,487.5	12,350	12,212.5
	B	2,631.5	2,703	2,774.5
Canada	A	9,096	9,132	9,168
	B	5,126.25	5,156.25	5,186.25
Saudi Arabia	A	5,134.375	6,356.25	7,578.125
	B	747	954	1,161
Total profit after taxes		$29,428,361.25	$29,886,197.5	$30,344,033.75
Net improvement over Run 1		1.58%	3.16%	4.74%

the transfer prices, the higher the net profit will be. The actual increase in net profits after taxes is 1.58 percent (prices dropped 5 percent), 3.16 percent (prices dropped 10 percent), and 4.74 percent (prices dropped 15 percent). The total profit increases by about $0.45 million with each variation of the bounds.

Run 5

The purpose of this run was to determine an upper bound to the value of the objective function (worldwide total profits). The tax factors were all set equal to one (implying that all taxes are excluded and profits are not taxed), and the transfer prices set equal to their lowest bound from the three previous runs: that is, 85 percent of the currently used value of transfer prices. Two significant objectives were attained from run 5. First, by determining an upper bound on total profits for the subject firm, a good opportunity was provided for performance measurement. The results of run 5 shown in exhibit 5 indicate the total profits before taxes and may be compared with the results of run 1 (exhibit

Exhibit 5. Summary of Run 5 Results

Run 5: To determine an upper bound on the total profit, by excluding all taxes and setting the transfer prices to the lower bounds.

		Sellers				
Manufacturers	*Product*	*U.S.*	*Australia*	*Canada*	*Saudi Arabia*	*Capacity totals*
			(in 1,000s of units)			
United States	A	100	0	5	185	290
	B	100	10	5	40	155
Australia	A		75		25	100
	B		20		0	20
Canada	A			85	0	85
	B			55	0	55
Demand totals	A	100	75	90	210	
	B	100	30	60	40	

Profits before taxes (in $1,000s)

	Product A	Product B
United States	$10,805	$5,660
Australia	12,213	2,775
Canada	9,168	5,186
Saudi Arabia	7,578	1,161

Total corporate profit, before taxes: $54,545,375

3) which was originated as a base for evaluating the realism of the model by using actual or historical data. Second, based on the results of run 5, the corporate tax rate for the subject firm as a whole can now be found. Because of the various rates of income taxation which exist in the four different subsidiaries of the case study, determination of the corporate tax rate is of significance to the management of the firm. In comparing the results of runs 1 and 5, it was found that the subject firm would have paid a total of $25,574,851 in income taxes, representing a corporate income tax rate of 47 percent, if the firm used 85 percent of actual transfer prices.

Run 5, repeating run 1 except that taxes on profits were ignored, showed that the upper bound on profits is $54,545,375. The optimal allocation of resources was identical to that in run 1. This indicates that the allocation should not change when all the transfer prices are dropped 15 percent in this run: that is, the resource allocation is not sensitive to changes of this magnitude in the transfer prices.

SUMMARY AND CONCLUSIONS

Even though some multinational firms use advanced operations research techniques to solve their resource allocation and transfer-pricing problems, based on the studies of the literature, there is a reason to believe that these two problems are generally solved separately. In this study, the two problems have been treated together in a mathematical context where the resource allocation and the transfer prices have been decision variables. The results of the case study indicate potential savings if the two problems are solved together. Many advantages are gained from the mathematical programming approach utilized in this study. The most important advantages include these:

1. The gains in total profits, as a result of the improved resource allocation and change of transfer prices;
2. An overview of the interdependent resource allocation and transfer-pricing problems; and
3. The possibility of making sensitivity analysis, particularly to get dual values on the scarce resources.

For the multinational corporation, resource allocation and transfer prices must be constantly analyzed. The model created and demonstrated in this study may reduce the man hours needed while improving decisions and profits.

APPENDIX. FORMULATION OF THE MODEL

Maximize:

$$(n)\ z = \sum_j (t_j p_j - L_j) + \sum_i (t_i p_i - L_i)$$

(worldwide net profit in all manufacturing and sales subsidiaries adjusted to the effects of taxes)

Subject to the constraints:

(o) $\sum_j e_{ij} \cdot x_{ij} \leq f_i$ for all i (manufacturing capacity constraints)

(p) $\sum_i h_{ij} \cdot x_{ij} \leq g_j$ for all j (demand constraints at sales subsidiaries)

where p_i, p_j, L_i and L_j for all manufacturing and sales subsidiaries are defined by the constraints:

$$(q)\ - P_j + L_j + v_j \sum_i x_{ij} + \sum_{i \neq j} x_{ij} w_{ij} - \sum_i k_{ji} x_{ji} - \sum_i (1 + d_{ij}) x_{ij} w_{ij} = 0$$

This means that the worldwide net profits for the whole multinational firm are equal to the sum of revenues from sales of the firm's products within the same manufacturing subsidiary (internal sales), plus revenues from sales of transferred products to other subsidiaries, minus costs of manufacturing and transportation (where applicable) of products, minus costs of buying from other subsidiaries including the cost of duties.

(r) $p_j L_j = 0$ for all j

(s) $p_i L_i = 0$ for all i

(t) $n_j \leq w_j \leq u_j$ for all j

(lower bound $\leq$ transfer price $\leq$ upper bound)

(u) $x_{ij}, w_j, p_i, p_j, L_i, L_j \geq 0$ for all i and j

Explanations

p_i and p_j are the profits including all costs, excluding taxes for division i and j, respectively.

L_i and L_j are the losses for divisions i and j, respectively. All constants are the same as in the second formulation. Accordingly, t_i and t_j are tax factors, which indicate the proportion of profits remaining after taxes: that is, if the tax rate is 40 percent, the tax factor becomes 0.60.

w_{ij} = the transfer price per unit, transferred from manufacturing subsidiary i to sales subsidiary j.

x_{ij} = the quantity of units manufactured in i, and transferred to sales subsidiary j.

f_i = plant capacity at manufacturing subsidiaries.

g_j = maximum demand at sales subsidiaries.

v_j = the sales revenues from selling some of the firm's units internally in the same manufacturing subsidiary.

x_{ji} = the quantity of units transferred to other subsidiaries within the same multinational firm at transfer prices yet to be determined.

k_{ji} = the sum of various costs attributed to j and i, respectively. k_{ji} includes manufacturing and transportation costs where $j \neq i$.

d_{ij} = the proportional duty factor for goods manufactured in i and sold to j. The duties are paid on the transferred value by the receiving subsidiary j.

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Japanese Corporate Structure: Some Factors in Its Development

MICHAEL T. SKULLY*

Those watchful of the financial press will note that America has not been the only country adversely affected by the recent depression. Indeed, in Japan during 1977, some 18,064 companies with outstanding debts of over U.S. $12.12 billion declared bankruptcy. Given Japan's importance as both an export market and as one of the most important suppliers of consumer goods and industrial products, it is important for any American considering an involvement in Japanese trade to know something about the Japanese economy and the way in which Japanese business activities are organized.

The intention of this article, however, is not to discuss the Japanese economy or give "hints" on doing business in Japan, but rather to examine a more specialized area within Japanese business: the development of the corporate structure of major Japanese industrial companies and their high reliance on debt fundings. While the average proportion of shareholders' funds to total funds employed is only 17.5 percent for Japanese corporations, the average for American companies is approximately 50 percent.

Financial statements can be translated, but the substantial differences, although logical from the Japanese viewpoint, are more difficult to understand. This is particularly true as the position has developed due to a variety of interrelated factors. This paper examines the more important ones: the Japanese attitude toward savings and investment, the

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historical development of the Japanese economy and its industrial corporation, and Japan's present corporate financial environment, and then considers what trends may be expected in the future.

JAPANESE ATTITUDES TOWARD SAVINGS AND INVESTMENT

One reason given for Japan's rapid economic growth and prosperity is the high Japanese propensity to save.[1] For example, during the second quarter for 1974, the Japanese worker saved approximately 24.4 percent of his income.[2] During the 1960s, individual savings averaged between 18 and 20 percent. These funds, mainly through financial intermediaries, found their way back into the economy providing the investment funds for the corporate sector. As shown in exhibit 1, the private, noncorporate or personal sector is the country's major source of funds.

Initially Japan's high saving rate was due to relatively low wages and a lack of social services. Traditionally, government funds were devoted to armament and industrial development, but this has changed somewhat in the postwar period. Indeed, because of relatively low government consumption expenditure, the government too maintained a high savings rate compared with other countries in the postwar period. Since the 1960s, more expenditures have been directed toward social services, mainly on infrastructure development and improvements, but there is an increasing emphasis on pollution control and social services.

A strong desire for "emergency" savings, the reliance on the bonus payment system, early retirement, lack of a developed consumer credit system, and a tradition against overconsumption have been influencing factors. Another reason for the high private savings level is that much of Japanese business is run on a sole-proprietor basis. The Japanese economy's "dual structure" has a few large firms (those Westerners can easily name) and a number of very small ones; employers with twenty-nine employees or less account for 95.8 percent of Japan's total business establishments.[3]

If compared with workers in Organization for Economic Cooperation and Development (OECD) countries, the Japanese have a rela-

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[1] T. F. M. Adams and Iwao Hoshii, *A Financial History of the New Japan* (Tokyo: Kodansha International Ltd., 1972), p. 339. More recently, what was a great strength has proved a burden in the current recession, and more domestic spending — not saving — would be more beneficial to the economy.

[2] "A Yen Saved the New Consumer Psychology," *Focus Japan* (March 1975): 10. The figure includes the summer semi-annual bonus and the savings related to it.

[3] *Investment Guide for Japan* (Tokyo: First National City Bank, 1973), p. 7.

Exhibit 1. Japanese Savings and Investor by Sector*

	1970	1971	1972	1973	1974	1975	1976
Corporate business							
Savings	11,857.7	11,347.5	13,334.7	13,094.1	7,492.4	9,464.2	12,126.6
Investment	19,646.3	19,599.2	23,130.8	30,825.9	28,501.7	25,114.5	25,746.1
Surplus (shortage)	(7,788.6)	(8,251.7)	(9,796.0)	(17,731.8)	(21,009.3)	(15,650.3)	(13,619.5)
Financial institutions							
Savings	1,596.9	1,664.5	1,837.4	2,752.2	2,864.3	2,718.7	2,575.7
Investment	411.9	414.1	426.5	677.9	687.2	709.1	660.0
Surplus (shortage)	1,185.0	1,250.5	1,410.9	2,074.3	2,177.1	2,009.6	1,915.7
General government							
Savings	5,316.6	5,570.6	6,615.8	9,350.2	8,694.9	3,735.1	3,991.3
Investment	3,923.4	5,089.2	6,371.9	6,923.4	8,620.8	9,250.9	10,022.7
Surplus (shortage)	1,393.2	481.4	244.0	2,426.9	74.1	(5,515.8)	(6,031.4)
Personal sector							
Savings	11,231.7	11,871.3	14,075.9	19,762.3	28,576.9	31,385.4	34,149.6
Investment	5,129.8	4,369.3	4,883.4	7,165.3	11,734.7	14,610.4	16,961.2
Surplus (shortage)	6,101.9	7,502.0	9,192.5	12,597.0	16,842.2	16,775.0	17,188.4

* Discrepancies due to rounding.
Source: Economic Planning Agency.

tively low monthly salary. On a yearly basis, however, their salary equals that of the United Kingdom and about 90 percent of what a worker receives in Germany.[4] The difference is caused by the semiannual (summer and winter) bonus system practiced by many Japanese employers.[5] The bonus varies with the economics of the company, so workers often depend on their salary for support and their bonus for savings. Exhibit 2 shows a more detailed breakdown of the usage.[6]

Exhibit 2. The Expected Usage of Bonus Payments by Age Groups

	All groups 100%	*Twenties 100%*	*Thirties 100%*	*Forties 100%*	*Fifties 100%*
Saving	55.6	54.5	53.5	57.6	59.3
Consumption	32.4	35.0	31.3	30.5	34.1
Repayment of loans	12.0	10.5	15.2	11.9	6.6

Source: A questionnaire survey by the Sanwa Bank to 876 housewives in Tokyo, Osaka, Kyoto, and Kobe, 1978.

The bonus system and the practice of "furloughing" employees at 60 percent of the monthly salary means that even with Japan's lifelong "permanent" employment system, the worker still needs to protect himself from economic adversity. Another facet of Japan's employment system is that the employment is "lifelong" only if the worker dies at age fifty-five. At that age, all but the most successful executives are usually asked to "honorably" leave the company. They often receive a pension, but in inflationary times, this is seldom adequate. As the government-paid pension does not commence until the age of sixty, many have no choice but to find employment elsewhere — usually at a much lower wage. Indeed, an OECD study conducted in 1973 found that 47 percent of Japanese sixty-five or older still worked, compared to 25 percent within the United States and only 15 percent in Europe.[7] A recent more detailed breakdown indicated that 92.2 percent of former workers in the fifty-five to fifty-nine age group are still working, 81 percent in the sixty to sixty-four year-old range, and 46 percent of those sixty-five or older.[8] Despite this high participation rate, obtaining re-

[4] "Seniority System at the Crossroads," *Focus Japan* (May 1975): 4.
[5] *Investment Guide for Japan,* p. 7.
[6] Interestingly, an earlier Economic Planning Agency study, *Trends in Consumption and Savings,* published in 1973 found savings less than 50 percent of bonus usage and debt repayment no more than 10 percent.
[7] Cited in *Focus Japan* (June 1977): 16-17.
[8] *Focus Japan* (May 1976): 9.

employment is more difficult for the older workers; some 40 percent of Japan's unemployed are forty-five years old or older.[9]

Another recent change in the traditional employment system is the trend away from the steady, seniority-based "corporate escalator" style of promotion/pay increase policies to a more merit-related plan. Automatic pay increases based solely on seniority now often cease when one reaches the age of fifty. The aging work force has made labor cost rise rapidly, and the Japanese Federation of Employers Association has proposed that after age forty-five, all workers, except executives, stay at a constant salary and that if desired, the retirement age be extended from fifty-five to sixty. Presently some 70 percent of workers are still covered by a mandatory age fifty-five retirement.[10]

To assist the workers to find new jobs, many corporations provide placement assistance and some occasionally re-employ former workers in a different capacity at a lower salary. Saving is also promoted, and more than half of Japanese firms operate a worker deposit, saving system. Under the program, workers are "encouraged" to have a certain portion of their salary remain on deposit with their employers. Barring bankruptcy, the system benefited both the employer and employee. The deposits paid a higher rate than banks and were a large source of funds for some labor-intensive companies.[11]

The Japanese may be good savers, but they have not become significant share investors. Banking one's savings, often with a government agency, has been a Japanese tradition for over one hundred years. Tradition and a tax-exemption program for bank deposits of 3 million yen or less[12] have caused over 90 percent of Japanese householders to have a savings account. Tradition, however, is against share-market "investment" and fewer than 9 percent of Japanese households own either government or corporate securities. The choice of bank deposits rather than shares is logical from an investment standpoint, too. Because of the low income level, a Japanese worker cannot afford much loss of capital and wishes his funds immediately available. His preference is

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[9] *Focus Japan* (April 1978): 12.

[10] *Focus Japan* (May 1976): 9. Kanji Haitani, "Changing Characteristics of the Japanese Employment Systems," *Asian Survey* (October 1978): 1029-45, discusses such factors as a slower growth of the national economy, the rising age of the work force, and the higher proportion of college graduates, all forcing changes to existing labor practices.

[11] "Bank and 'Unorthodox' Corporate Savings Up," *Focus Japan* (May 1975): 21. Some recent bankruptcies forced some separation between the investments and the employers, and it is no longer a major source of funds.

[12] *Banking System in Japan* (Tokyo: Federation of Bankers Associations, 1976), p. 360.

therefore for liquidity and safety. As the individual's real private wealth increases, there will be more scope from which to diversify financial assets and include more risky alternates such as shares.[13] The significance of the various financial assets to Japanese savers is shown in exhibit 3.

Exhibit 3. Financial Assets of Households (March 31, 1978)

	Y100 million	*%*
Currency	109,468	4.7
Demand deposits	228,387	9.8
Time deposits	1,207,411	51.8
Trusts	150,599	6.5
Insurance	306,066	13.2
Government securities	79,036	3.4
Bank debentures	104,218	4.5
Industrial bonds	18,749	0.8
Stocks	58,563	2.5
Securities investment trust	44,184	1.9
Others	20,731	0.9
	2,327,412	100.0

Source: Bank of Japan, *Economic Statistics Monthly* (November 1978), p. 190.

Despite their relatively small holdings of shares, private investors represent the largest single group of Japanese stock owners as indicated in exhibit 4. Financial institutions together also have a high degree of

Exhibit 4. The Distribution of Japanese Share Ownership

	1973(%)	*1976(%)*
Government	0.2	0.4
Commercial trust banks	15.7	N.A.
Insurance companies	15.9	32.6
Investment trusts	1.3	N.A.
Securities companies	1.8	1.2
Other Japanese companies	28.9	29.7
Individuals	32.7	33.4
Foreign holdings	3.5	2.7
Total shareholdings	100.0	100.0

Source: *A Guide to the Japanese Securities Market* (Tokyo: The Nomura Securities Co. Ltd., 1973); and the Bank of Japan, *Economic Statistical Annual* (1977), p. 189.

[13] While the Japanese savers hold a higher per capita annual savings than their American counterparts (Y250,000 versus Y120,000), their financial asset holdings are only half of that in America (Y1,620,000 versus Y3,570,000).

share ownership, and their monetary significance as shown in exhibit 5 is much higher. In 1951, the situation was the reverse with individuals owning approximately 61 percent of major listed companies.[14] Bank-related investments, the re-emergence of the industrial groups, and their cross ownership coupled with government concern over possible foreign takeovers were important factors in the change.

Exhibit 5. Distribution of Domestic Japanese Share Ownership (March 31, 1978)

	(Y100 million)	%
Bank	43,082	18.5
Other financial institutions	69,535	29.8
Public financial institutions	299	0.1
Government	3,001	1.3
Corporate	58,820	25.2
Personal	58,563	25.1
	233,300	100.0

Source: Bank of Japan, *Economic Statistics Monthly* (November 1978), p. 187-90.

One reason for the relatively small holdings of corporate shares by Japanese, and for corporations to have tended not to use the share market as a major source of funds is the Japanese traditional attitude toward speculation rather than investment in the share market.[15] Even with the establishment of the Tokyo Stock Exchange, the market was still "dominated by speculative transactions on a few issues and an inability to function as a supplier of long-term industrial capital."[16] The interlocking shareholdings within Japanese business conglomerates also limited the shares available in Japan's more progressive companies. Today, trading rather than a "buy and hold" policy is still the rule. Even the tax commissioner recognizes the speculative nature of the Stock Market and of the Japanese investor, for the average taxpayer is allowed up to fifty transactions a year before being subject to capital

[14] *Asian Finance* (November 1975): 77. When foreign investments were allowed in Japan in the late 1960s, there was some concern of takeovers, and corporations looked to the Japanese financial institution holdings as a good means of defense; individual shareholders were not encouraged as a result.

[15] Herbert M. Bratter, *Japanese Banking* (Washington: U.S. Government Printing Office, 1931), p. 276. The Stock Exchange is hardly a new institution in Japan; a formalized system existed as early as the 17th century.

[16] *Securities Market in Japan* (Tokyo: Japan Securities Research Institute, 1973), p. 2.

gains taxation.[17] Japanese investors apparently fully utilize their tax advantage since the Tokyo Stock Exchange (TSE) conducts more transactions than any other exchange in the world. In 1977, for example, the Tokyo Stock Exchange had an annual turnover of 71,195 million shares compared with 5,276 million on the New York Stock Exchange (NYSE). Even when the TSE's relatively low share prices are taken into account, Tokyo's annual U.S. $107,500 million is second only to the NYSE's U.S. $155,254 million.[18] Also, largely because of their tax advantage and the popularity of gambling, individuals account for 80 percent of the turnover on the Japanese market compared to only 30 percent for the NYSE.[19]

THE HISTORICAL DEVELOPMENT OF THE JAPANESE ECONOMY AND ITS INDUSTRIAL CORPORATION

Japan's relatively late start in industrial development explains Japanese corporations' heavy reliance on bank financing. Even before World War II, much had occurred to influence the financial structure of today's industrial corporation. Very briefly, the significant factors can be broken down into four major areas.[20]

1. Prior to Japan's major industrial development with the Meiji Restoration (1869), the economy had evolved into the mercantilism stage of development, but its accumulation of wealth was insufficient for a spontaneous industrial revolution.[21] In fact, some suggest

> . . . industrialization in Japan was not started through private initiative; it was launched by the government to solve a national emergency (created by

[17] In principle, there is no capital gains tax for individuals from a securities transaction. However, capital gains taxes are levied on profits from continuous stock trading. Continuous stock trading is defined as fifty or more transactions involving 200,000 or more shares per year; each buy or sell order is counted separately (regardless of the number of issues).

[18] M. E. Barret, L. N. Price, and J. A. Gehrke, "Japan — Some Background for Security Analysts," *Financial Analysts Journal* (January-February 1974): 37.

[19] J. A. Morrell, "Japan Fertile Ground for the Analyst," *The Investment Analyst* (May 1972): 12.

[20] Edward F. Denison and William K. Chung, *How Japan's Economy Grew So Fast: The Sources of Post War Expansion* (Washington: Brookings Institution, 1976); and Richard E. Caves and Masu Uekusa, *Industrial Organization in Japan* (Washington: Brookings Institution, 1976) provide detailed coverage of Japan's development process.

[21] The merchant class had been developed since the 1600s but rated the lowest place on the social order: first the samuri, then the farmer, the manufacturer, and finally the merchant.

the Western powers) when in the mid-1800s Japan was forced out of its two century old isolations.[22]

2. Because of the small level of investment funds, the government was forced to play the role of "banker" and of "financier" for much of the private sector. The intitial dependence on government support fostered a tradition of heavy involvement between government and private industry. This spirit of "cooperation" exists today, and the government still maintains an active role in the financial and industrial sector.
3. Japan's continued rapid economic growth meant an almost constant requirement for new capital funds. Business funds were largely reinvested in new plant and equipment, and there was limited opportunity for individual wealth accumulation.
4. Finally, the individual savings that developed were not directly reinvested in the private sector. The Japanese bank was strictly a businessman's bank; hence, individual savings were mainly collected through the government post office network. These deposits were then invested by the government's financial institutions. This government reinvestment of private savings strengthened its already important industrial role.[23]

The development of Japan's early business conglomerates, the zaibatsu holding companies, also influenced modern structure. As a product of Japan's early merchants, these holding companies were next in importance to the government and the banking system in Japan's economic development. Most early nongovernment industry was small, and the larger trading houses, which developed into the zaibatsu, could effectively control suppliers through their marketing power. With the cash flow generated by their trading activities and the respectability of their names, the zaibatsu developed a financial function much like the U.K. merchant banks and eventually gained control of many major commercial banks. Other banks, such as Fuji and Sanwa, actually developed zaibatsu-type empires of their own.[24] The zaibatsu were able

[22] Robert J. Ballon, Iwao Tomita, and Hajime Usami, *Financial Reporting in Japan* (Tokyo: Kodansha International Ltd., 1976), p. 77.
[23] From a more international viewpoint, Japan's military successes in the neighboring regions of Northern China (the Sino–Japanese War 1894-95 and the Russo–Japanese War 1905-6) were tremendous stimulants to the economy and indirectly an important source of private capital formation. Adams and Hoshii, *Financial History,* give a detailed account of the postwar Japanese capital market. Also see Keiichiro Kakagawa, ed., *Strategy and Structure of Big Business* (Tokyo: University of Tokyo Press, 1978).
[24] "Industrial Groups Dominate the Japanese Economy," *Oriental Economist,* (1973): 6.

to overcome Japan's poor capital accumulation problem and by the time of World War II had amassed tremendous power. The two largest, Mitsui Bussan Co. Ltd. and Mitsubishi Trade Co., accounted for over 70 percent of Japan's foreign trade.[25]

After World War II, the Allies saw the zaibatsu concentration of industrial and economic power as one reason for the war and divided this empire into a number of separate corporations: the Mitsui group became some 180 different companies. The zaibatsu group banks, however, were left much as before and eventually filled the power vacuum. When the Japanese government required substantial capital investment for heavy chemicals and other industrial development, the major Japanese banks helped supply it and gained some position of control. In many cases, the banks also purchased shares in formerly zaibatsu-associated companies as the government relinquished its holdings.

In the postwar period, Japan's economy was so damaged that industrialization began anew following similar lines as before. From 1945 to 1949, the economy was basically involved with reconstruction but 1950 to 51 saw this emphasis change as the Korean War and the related economic boom affected the economy. There was a tremendous need for capital investment, and again the public sector raised substantial deposits through the postal system and redirected them into the private sector. The Allies had caused a number of changes in the postwar banking system, but soon a whole range of new financial institutions were providing much the same, though improved, government-sponsored financial services. The government also assisted the economy through the commercial banking system as the Bank of Japan's "over loan" system (the "Bank of Japan-city bank-big business" line) allowed the banks to make substantial loan commitments to their customers.[26]

On the labor side, the postwar industrial expansion had a readily available supply of workers from the more traditional areas of the economy. In 1950, some 48 percent of the work force was involved in agriculture. This was reduced to 41 percent by 1960, 32.6 percent by 1965, 19.3 percent by 1970, and approximately 10 percent by 1975. Although further transfers of agricultural workers are justifiable economically, gov-

[25] T. Yamawaka, "The Role of the Sogoshosh," *Columbia Journal of World Business* (Winter 1973): 973.

[26] Tokyokuni Yamanaka, *The Role of Japanese Bank in Economic Growth* (Institute für Bankwirtschaft an der Hochschale St. Gallen, June 1973), p. 6. A British study found that companies (in Japan) had access to external sources of large-scale long-term debt finance that had no adequate counterpart in Britain. They felt this finance was a crucial factor in Japan's higher economic growth. Cited in the *Australian Financial Review* (21 October 1976): 42.

ernment policies have caused recent labor supplies to come more from declining industries, such as textiles, than from agriculture. A side effect of this is that while wages rose on an average of 13 percent from 1963 to 1972, the labor cost per unit rose by only 2 percent due to gains in productivity.[27]

By the second postwar boom (the Iwato boom of 1959-61), the old zaibatsu groups began to reconstruct themselves into today's Japanese industrial conglomerates; Mitsubishi and Mitsui interests had begun to reassemble by 1954 and 1959, respectively.[28] Until Japan's first postwar boom (the Jimmo boom 1955-57), the efforts of individual, separate corporate parts of the old zaibatsu groups had been directed to regaining their former internal levels of production and influence. Once achieved, the firms sought more diversified and extensive expansion programs, but investments in completely new areas of operation were risky. To reduce risk exposure and gain additional financial assistance and expertise, joint ventures and other forms of corporate cooperation were utilized, particularly in overseas investment projects. Foreign production and trade required specialized expertise, also, and the great trading houses of prewar Japan returned to fill this role. Thus by the mid-1960s, the trading companies had begun to equal the banks in importance within their respective groups, particularly as they could more readily establish operations overseas.[29] Trading companies also became important in domestic trade, and in 1976, major trading companies handled 52 percent of Japan's foreign trade and some 20 percent of domestic wholesaling.[30] A list of today's major trading companies is shown in exhibit 6. Indeed, their activities now extend to most aspects of Japanese business causing this comment: "While some of their business functions can be compared with those to merchant banks in Europe or conglomerates in the U.S., no business organisation outside Japan combines the same totality of characteristics."[31]

With this domestic and overseas expansion, new conglomerates began to emerge, sometimes even using the same names as their zaibatsu counterparts. Unlike the old zaibatsu, where the holding company or

[27] *Finance and Development* (July 1977): 37.

[28] K. Bieda, *The Structure and Operation of the Japanese Economy* (Sidney, Australia: John Wiley, 1970) has an excellent discussion of the "keiretsu" and Japan's postwar grouping. Also see Keiichiro Nakagawa, *Strategy and Structure of Big Business* (Tokyo: University of Tokyo Press, 1978).

[29] Some, however, suggest that with Mitsui, the trading company actually replaced the bank as the most important group member.

[30] *Focus Japan* (January 1978): 18.

[31] *Asian Finance* (15 November 1975): 67.

Exhibit 6. Business Results of the Nine Major Trading Companies ("Sogoshosha"): April 1978-September 1978

	Sales (Y trillion)	*Operating profit (Y million)*	*Net profit (Y100 million)*
Mitsubishi Corp.	4.24	214	80
Mitsui & Co.	3.96	114	41
C. Itoh & Co.	3.14	15	15
Marubeni Corp.	3.05	111	21
Sumitomo Shoji	2.86	88	37
Nissho-Iwai	2.08	50	25
Toyo Menka Kaisha	1.02	13	7
Kanematsu-Gosho	1.01	7	2
Nichimen Co.	0.89	26	6

Source: "Toyo Keizai," 2 December 1978.

family both managed and controlled the group directly, the new industrial group has decentralized management and control or, as one observer commented, it is "a combine without a head."

The saying "one group, one set" gives a good indication of the Japanese industrial groups' diversification. Each is virtually a miniature economy in itself. The Mitsui Group, for example, consists of forty-five major corporate enterprises operating in twelve major industrial areas. After the war, the group reorganized with the bank as the financial hub. In the case of the Mitsui Bank–Mitsui Group relationship, members obtained about 25 to 35 percent of their borrowing from the group bank, and the bank's loans to member companies occupy a similar percentage of total loans.[32] Substantial intercompany loans are also made to and from the trading company by group companies as well as between themselves. From an equity capital/control viewpoint, determining group ownership structure is more difficult. One firm seldom has majority control of a group company; instead, most groups control results from a maze of interlocking corporate shareholdings. Within the Mitsui group, for example, Mitsui & Co. owns at least 50 percent of the stock of 50 other companies but sends representatives to sit on the boards of more than 160 different companies.[33] An indication of the relative importance of interlocking shareholdings and financial arrangements is provided in exhibit 7. The significance of the trading companies is re-

[32] *The Mitsui Story* (Tokyo: Mitsui & Co., Ltd., 1968), p. 59. Note that with the change in bank law in 1974, the importance of bank group lending has declined. Under the antimonopoly law, bank groups cannot hold more than 10 percent of a customer's shares, a limit to be reduced to 5 percent by 1987.

[33] Ibid., pp. 59-60.

flected in that they "hold shares in some 924 of the 1,800 firms listed on the stock exchange and are the biggest shareholders in 1,057 firms including many not listed on the exchange, and hold shares in over 5,000 companies."[34]

Exhibit 7. Intragroup Shareholdings and Institutional Borrowing Among Group Members

Groups (number of affiliates)	Percent intragroup shareholders: By financial institutions	Others	Total	Borrowings from group financial institutions
Mitsui (23)	10.59	5.21	15.80	21.98
Mitsubishi (27)	15.77	9.14	24.91	29.47
Sumitomo (16)	15.19	9.95	25.14	31.07
Sanwa (36)	5.10	9.42	14.52	20.88
Fuyo (29)	9.75	4.19	13.94	23.15

Note: Together the above 132 group companies have 17 percent of total equity capital and 18 percent of corporate sales in Japan.
Source: Toyo Keizai Shimposha as cited in *Focus Japan* (January 1977): 6.

Coordination within the group itself is accomplished through an informal sort of board of directors composed of the chairmen and presidents of the group's twenty-three major companies. Referred to as the "Nimokukai" (the second Thursday club), the Mitsui, the "board" meets monthly to exchange views while a somewhat larger thirty-six company group, the "Getsuy-Kai," coordinates smaller companies and more distant Mitsui group efforts.[35] Mitsubishi has a similar arrangement with a ten-company council, the "Sewanin-kai," and a larger "Kinyokai" or Friday club composed of twenty-seven major companies.[36] Today in the so-called corporate family, the trading company might be compared to the father, the bank to the mother, and some larger affiliated companies as the older brothers and sisters and the other corporations as the children. Mitsui's grouping centers around the parentage of the Mitsui Bank Ltd. and the trading company, Mitsui & Co., with the Mitsui Real Estate Development Corporation as an elder brother. Mitsubishi's group is also based on the Mitsubishi Bank, and the Mitsubishi Corporation (the trading company) with Mitsubishi

[34] *Asian Finance* (15 November 1975): 68.
[35] *Annual Report* (Tokyo: Mitsui Bank, 1974), p. 24.
[36] "Industrial Groups Dominate the Japanese Economy," *Oriental Economist* (May 1975): 6.

Heavy Industries as the number one son. As with all families, the relative family spirit and the power of each member differ considerably from group to group.

The choice of the informal family style of group structure versus the direct control system of the zaibatsu is largely a function of the Allied occupation. First, in breaking the zaibatsu into individual companies, the Allies produced a whole class of independent managers who, at least in the initial postwar period, worked for the best interest of their companies, not of the group. As the groups gradually reformed, many were unwilling to relinquish their by then well-established management independence. In any event, holding companies were prohibited by the Allies so that a different system had to develop. Within the group, companies can be tied by mutual ownership, financial support, or reciprocal business, but often the affiliation is based on personal friendship or on "... a historical association or inclination to a particular group."[37] Determining the actual affiliations and their strength is further complicated by group members who in turn often have their own industrial or enterprise groupings. Hitachi Ltd. (with thirty-seven major affiliates and four main banks) and Nissan Motors, for instance, are both major enterprise groups in their own right but nevertheless have some affiliation with the Fuyo Group (Fuji Bank and Marubeni Corporation). Some companies have affiliations with more than one group such as Kubota Ltd., an industrial machinery producer which participates in the group council meetings of both Fuyo and Sumitomo.[38] Others have changed their affiliation over time. The Marubeni Corporation, for example, had relations with the lead bank, Sumitomo Bank, but later, at the request of Fuji Bank, took over the troubled Fuyo affiliate and in return became the Fuyo group's major trading company.[39]

Another aspect of the postwar Japanese corporation development was the corporate financial structure change from what Western observers might call a "normal" or conservative debt-to equity ratio to what is today often considered a typical Japanese debt-to-equity structure.

During early Japanese industrial development, debt, as shown in exhibit 8, played a minor role in early corporate funding. This dependence on internally generated capital and external share raisings was influenced by the importance of the zaibatsu affiliated bank in the prewar economy. In 1944, the four major group banks — Mitsubishi,

[37] *Industrial Groupings in Japan* (Tokyo: Dodwell Marketing Consultants, 1973), p. i.
[38] Ballon, Tomita, and Usami, *Financial Reporting*, p. 46.
[39] Ibid., p. 52.

Mitsui, Sumitomo, and Yasuda (now Fuji) — accounted for 74.9 percent of all bank loans.[40] Furthermore, their leading activity was group directed, and other companies received finance only after the members' needs were met. The influence of the zaibatsu holding company was such that with Mitsubishi, the bank operated as simply a department of the main company.

Exhibit 8. Capital Structure of Manufacturing Industry Second Half of 1894

	Total debt as % of total assets	*No. of firms*
Food	19.83	15
Chemical	23.64	7
Brick	13.38	8
Cement	28.54	4
Metal	20.27	5
Machinery	26.40	5
Average	23.12	44

Source: Toashimitsu Imuta, "Capital Structure of Industrial Firms in the Middle of Meiji," *Keizaigaku Zasshi* (*Journal of Economics,* Osaka Municipal University), vol. 62, nos. 1-2.

As shown in exhibit 9, the postwar period in contrast shows a continued reliance of borrowings as the major single source of funding. The rapid growth rate in the postwar period is often chosen as the reason, but the rapid growth of assets might well have been financed by other forms of external funding. There is not a specific reason but rather a variety of interrelated factors as to why debt, especially bank borrowings, was chosen. The high inflation in Japan from 1945 to 1949 might be a partial cause for financial managers' preference for debt rather than equity. Similarly, hyperinflation allowed companies to increase debt levels as the burden of their tax-deductible interest charges decreased in real terms. With debt financing, the choice of bank loans versus bond financing was due intitially to the ease of bank borrowings compared with public bond offerings. The Bank of Japan supports this

[40] David A. Alhadeff, "Banks — Business Conglomerates — the Japanese Experience," *Banca Nazionale del Lavoro Quarterly Review* (September 1975): 248. In the postwar period, the importance of the group banks' loans to members was reduced as "... inflation made it impossible for one or two banks to meet the rapidly increasing demand for funds by big enterprises. Thus the postwar inflation gave an early and important impetus toward making the relationship between banks and big companies multilateral. This trend has continued during the postwar years due to the growing inability of the group banks to fill the needs of their affiliates." (p. 237).

argument, pointing to the "close relations between business and financial institutions after the war" and the "underdeveloped bond issue market" as contributing factors.[41]

Exhibit 9. Source of Finance of Japanese Industrial Corporations

(Figures in 100 million yen)

	External			*Internal*		
Year	*Share*	*Bond*	*Loan*	*Dep.*	*Retained earnings*	*Total*
1934-36	9.99	.06	2.37	9.43	3.44	25.29
%	39.5	0.2	9.4	37.3	13.6	100.0
1955	955	265	5,543	6,140	2,219	15,122
%	6.3	1.7	36.7	40.6	14.7	100.0
1960	4,719	1,528	23,025	12,444	9,563	51,279
%	9.2	3.0	44.9	24.3	18.6	100.0
1965	2,626	2,194	44,892	31,207	9,546	90,465
%	2.9	2.4	49.6	34.5	10.6	100.0
1970	10,029	3,589	112,640	71,998	47,576	245,832
%	4.1	1.5	45.8	29.3	19.3	100.0

Source: Bank of Japan, *Keiza: Tokei Nenpo* (Annual Report on Economic Statistics) in *Nihon Keizai Toguhon Toyokeizai* (Tokyo: Toyokeizai Publications, 1973), p. 101, Table 6.1.

The Japanese central bank indirectly assisted this development by imposing an artificially low interest-rate policy (hence rationing credit) and through the over-loan system. In both cases, the commercial banks allocated their fundings based on industrial group connections and those firms offering the best potential banking business. To the extent that these groups often overlapped and generally included the more efficient firms, the bank allocation system worked to the economy's overall advantage. The capital raised through the private banking system went to the more productive sectors of the economy and the over-loan process — the ability of the banks to grant advances in excess of their deposit base — further stimulated the growth of these industries and strengthened the development of Japan's present day "dual economy."

This ability of banks to lend in excess of their own resources, through borrowings from the Bank of Japan, was very important to the financing and structure of the postwar development. One researcher has even suggested that Japan's entire industrialization process "has been built

[41] *The Japanese Financial System* (The Bank of Japan, 1978).

on discriminatory bank credit."[42] Indeed, the demands for funds were such that the banks were chronic borrowers from the central bank. More recently, though, in the 1970s, the slowing of Japan's economic growth and the corporate sector's increased use of more direct financing has made the Bank of Japan's loans somewhat less important; in some years, the banks have even repaid previous borrowings.

THE CORPORATE FINANCIAL ENVIRONMENT

The previous sections should imply that the Japanese financial manager operates in a much different environment than does his American counterpart. Before discussing how these factors affect Japan's corporate structure, the Japanese attitude toward the corporation itself should be considered. The Japanese practice of permanent or life employment has already been mentioned, but discussion of this practice should now be expanded to reflect the Japanese attitudes toward financial business risk. Traditionally, upon beginning employment with a corporation, the average worker is actually "joining" rather than being employed. He feels virtually more a part of the corporate "family" than of any other group,

> . . . a boiler-mender working for Mitsubishi feels he has more in common with other people doing different jobs in Mitsubishi than with boiler-menders who work for other firms. And a Mitsubishi executive feels a stronger tie to that boiler-mender than to any abstract middle class.[43]

The "corporate spirit" is also reflected in a "corporate song" or "pledge." At Matsushita Electric, the day begins with the company song and recitation of the "seven mottos" in unison and ends with a chorus of the "Matsushita March."[44] While this practice is declining among major Japanese companies, it nevertheless reflects the "family corporate spirit" that existed, and to some extent still exists, within Japan.[45]

As mentioned, a heavy reliance on the twice-yearly bonus also adds to an employee's financial sense of belonging and produces a more will-

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[42] E. M. Hadley, *Antitrust in Japan* (Princeton, N.J.: Princeton University Press, 1969), p. 287. Alhadeff, "Banks — Business Conglomerates," pp. 232-67, also provides an excellent discussion of the arguments on the preferential allocation of credit to affiliated firms.

[43] Brian Beedham of the *Economist* as cited in Norman Macrea, "Why the Japanese Economy Is about to Bounce Back — and into Another Superboom," *National Times* (20-25 January 1975): 34.

[44] *Focus Japan* (December 1976): 8.

[45] In a literal attempt at a corporate family, the Fuyo Group, which includes the Fuji Bank, Maruben, Nissan Motors, and Hatachi, opened the Fuyo Family Club — a marriage counseling service — to group employees.

ing attitude toward corporate efficiency and technological change. The structuring of the Japanese union on a company rather than an industry or skill basis adds to the mutual benefit feeling within the corporation. To ensure lifelong employment for its members, the unions allow contract or part-time nonunion employees as well as liberal subcontracting to cover peak or seasonal demands (some 40 percent of workers in shipbuilding).[46] This, together with the bonus system, allows the employer a variable wage and reduces the cost problems of the life-long employment system; much business risk is simply passed on to the workers. It, of course, also causes underemployment. In 1975, the Research Department of the Industrial Bank of Japan estimated over 2 million workers were still employed, largely as a result of the life-employment system.[47]

The purpose of stressing these attitudes is to indicate first that the Japanese worker — at least in relation to the larger or listed companies — views the corporation as an ongoing "lifetime" business, not as a risky venture. His willingness to share some business risks with his firm reduces the business cycles' affects on the firm's debt-servicing ability.[48] Similarly, while the worker's status is determined by his own achievement and seniority, his total income — largely through the bonus system — is a function of the corporation's success.[49] Thus, in setting corporate goals and in decision making, the opinions of the firm's workers, the government, and, in more recent times, the community are considered along with those of the firm's shareholders. The "ringisho" (circulating a decision paper among staff members for their stamped signatures) process of decision making itself ensures that a wide variety of individual opinions are expressed.[50] From personal experience, committee decisions appear more risk adverse than ones made by individuals; one can speculate that Japanese business risk might be similarly affected. To the Japanese, the industrial group giants, such as Mitsui and Mitsubishi, are virtually a self-contained economic system; for one

[46] *National Times* (29 July 1978): 48.

[47] *Focus Japan* (June 1977): 16-17. Most of these would be classified as underemployed but still contributed to the work effort. More recently, it has been suggested that of these, some 500,000, do no work at all and are thus known as "sekio atata-merudake" or seatwarmers.

[48] This attitude toward lower wage and higher bonus is changing, and workers' unions are taking a more traditional view.

[49] W. D. Wallace, "The Secret Weapon of Japanese Business," *Columbia Journal of World Business* (November-December 1972): 47.

[50] See Peter Drucker, "What We Can Learn from Japanese Management," *Harvard Business Review* (March-April 1971), for a further discussion of the Japanese managerial process.

of the groups or their affiliated companies to go bankrupt is seemingly not feasible. A good banking relationship, and the banking system's support by the central bank, the Bank of Japan, makes this attitude quite reasonable.

When actually evaluating corporate finance in Japan, a few distinctive features become immediately apparent. The first, as shown in exhibit 10, is the industrial corporation's high dependence on external debt financing and corresponding low levels of equity; neither reflects contin-

Exhibit 10. A Consolidated Balance Sheet of Principal Japanese Industrial Corporations, 1972

Funds			
(17.5%)	Capital and reserves		
	Capital	541,488	
	New share payments	12,795	
	Share premium	103,671	
	Reserves	380,097	
	Retained earnings	124,777	1,163,830
(31.2%)	Noncurrent liabilities		2,078,348
(51.3%)	Current liabilities		
	Short-term debt	1,118,977	
	Creditors	1,395,511	
	Others	894,378	3,408,776
(100.0%)	Total capital and liabilities		6,650,954
Represented by			
(30.7%)	Fixed assets		2,039,834
(15.7%)	Investments		
	Securities	217,663	
	Others	817,539	
	Total investments		1,035,202
(53.0%)	Current assets		
	Currency and deposits	771,422	
	Debts	1,638,137	
	Inventories	833,002	
	Other current assets	284,725	
	Total		3,527,286
(0.4%)	Intangibles		32,338
(0.2%)	Other assets		16,294
(100.0%)	TOTAL ASSETS		6,650,954

Source: *Japan Statistical Yearbook, 1973-1974* (Tokyo: Office of the Prime Minister, 1974), p. 316.

gency liabilities. This does not represent an unusual situation. Exhibit 11, in fact, shows that decline.

Exhibit 11. The Importance of Equity Financing in Principal Japanese Enterprises (by percentage)

1969	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*
20.3	19.3	17.9	17.5	17.0	16.77	15.90	16.65	16.49

Note: Changes in the bank's statistical procedures include certain reserves from 1974 onward not included in prior years. The older method would show a worse equity position (15.4 percent in 1974), but the reversal in the trend in 1977 would be the same.
Source: *Economic Statistics Annual* (Tokyo: Bank of Japan, 1975 and 1978 issues).

The substantial difference between the Japanese debt levels and those in the United States or Australia should not be taken strictly at face value.[51] As one authority explained, "land, building, plant and equipment are all items of financial reporting in which the gap between book value and current values of corporate assets widens annually. Only once, between 1950 and 1954, were asset revaluations allowed."[52] Another area of "hidden" profits is a firm's real estate holdings. Thus, corporate profits are frequently understated, and a translation into "real" profits might boost equity levels to 20 to 30 percent of total capital. The reported results are further complicated in that

> corporate earnings are given in three forms (securities report under the Securities and Exchange Law, the shareholders report under the Commercial Code, and the tax report under the Tax Law. . . . Since the criterion for calculation differs in each case, these earnings are not necessarily the same.[53]

A general statement of the major accounting principles followed in Japan are shown in exhibit 12.

Another possible area of confusion is the use of trade credit as a source of finance. Most business transactions in Japan are settled by commercial bills which are then held or discounted, and trade credit is

[51] See Gerhard G. Mueller and Hiroshi Yoshida, *Accounting Principals in Japan* (Seattle: University of Washington, 1968), and Price Waterhouse, *Guide for the Reader of Foreign Financial Statements,* for additional information.

[52] Ballon, Tomita, and Usami, *Financial Reporting,* p. 253. More details on the problems with revaluations can be found in Susuma Katsuyama, "Recent Problems of the Financial Accounting System in Japan," *International Journal of Accounting* (Fall 1976): 121-31.

[53] Keisuke Okua, "Reported Income of Corporate Groups," *Asian Finance* (15 August 1978): 50. Other areas of caution include the practice of excluding a firm's finished work from inventory until it has been subject to a thorough inspection, rarely capitalizing expenses, and using a variety of special reserves.

Exhibit 12. Major Accounting Principles in Japan

General principles	1. Principle of truth	To furnish an accurate report on the financial condition and operating results.
	2. Principle of distinguishing between capital transactions and profit and loss transactions	To draw a sharp distinction between capital and profit and loss transactions. (For example, premiums on capital stock should be treated as capital transactions.)
	3. Principle of clearness	To furnish interested persons with the financial statements clearly and accurately.
	4. Principle of consistency	To apply established principles and procedures continuously to every accounting period and not to change them without good reason.
Income statement principles	1. Principle of costs matching income	To enumerate all revenue and the corresponding expenses accrued during the period.
	2. Principle of accrual	To add all revenue and expenses accrued during the period to the computation of profit and loss regardless of any cash receipts and payments.
	3. Principle of realization	To exclude prepaid revenues and expenses (appraisal profit, etc.) from the computation of profit and loss for the period.
Balance-sheet principles	Principles of asset valuation	To base the valuation of assets listed on the balance sheet at cost, except that inventory assets and marketable securities may be valued at market price, if this is lower than their acquisition cost.

Source: *Securities Market in Japan 1975* (Tokyo: Japan Securities Research Institute, 1975), p. 134.

viewed as a somewhat permanent type of finance. The practice is further encouraged through the financial function of the general trading companies and industrial groups. The zaibatsu in prewar Japan gained much of its power from assuming the financial and marketing responsibility of its suppliers, and today's trading corporation plays a somewhat similar role. They often provide raw materials on trade credit and, in some cases, advance payment on purchases to suppliers in return for a lower price and assured supply. The trading company's knowledge of the market and viability of its customers and suppliers also allows it to assess the risk better. From a banker's point of view, too, lending to a trading company is preferable to lending directly to smaller

enterprises.[54] Thus, the major trading and industrial companies still provide much of the finance for smaller firms. When money becomes tight, trade credit is not tightened as quickly. Rather, firms cooperate to ensure that no one is placed at a disadvantage.[55] Thus, with the exception of major recessions or extremely tight money, trade credit is often a more reliable and, with no compensating balance required, usually cheaper source of finance. As a reflection of trading company assistance, Japan's eighty banks have Y100 trillion in outstanding loans while the major trading companies have Y9 trillion extended in business credits, loans, and payment guarantees.[56] For this reason, the major trading companies are sometimes called Japan's "hidden bankers." Trading companies are even involved in the dealings of small companies with "real banks" since they often guarantee the advances.

As mentioned previously, the development of the Japanese industrial corporation in the postwar period was very much dependent on the supply of external capital. For example, in 1974, internally generated funds accounted for only 29.2 percent of total corporate funding. As shown in Exhibit 13, bank loans were the most important external source.

Indeed, the relationship between a firm and its bank is perhaps the key to Japanese corporate finance. The tie is very strong, and each com-

Exhibit 13. Supply of Funds for Corporate Sector

	(Figures in Y1,000 billion)	*(%)*
Bond issues	48	(2.5)
Stock issues	112	(5.7)
Bank loans	1,050	(53.9)
Trade credit	739	(37.9)
	1,949	(100.0)

Source: Bank of Japan.

[54] *Using Trading Companies in Exporting to Japan* (Tokyo: Japan External Trade Organization, 1972), p. 11. The collapse of Ataka may change their view.

[55] M. E. Barret, L. N. Price, and J. A. Gehrke, "Japan — Some Background for Security Analysts," part 2, *Financial Analysts Journal* (March-April 1974): 66. Most banks also loan to corporations on the basis of bills of exchange. They are for only a two- to three-month duration but can be renewed and are often used as a type of rollover finance. Discounting commercial bills is the second most important source of corporate bank funds and accounts for 26 percent of bank lendings. Bank loans on deeds are also an important source of corporate finance and total 21 percent of bank lending.

[56] *Focus Japan* (January 1978), p. 18.

pany normally has one "lead" bank where it conducts most business. One reason for the close mutual relationship is the Japanese attitude toward bank lending. As mentioned previously, most major banks belong to an industrial group, and the loans extended within the group could be considered a form of equity investment. Even with nongroup customers, the idea that the bank is participating in the enterprise itself, not just lending money, is a very strong and valid feeling. It is what Peter Drucker calls "... legally a bank loan but economically ... an equity investment. ..."[57] A bank's initial loan decision is most important and based on the potential customer's reputation. Once established, the banks have a sense of obligation to stand by their clients. A surprising number of well-known companies have been the recipients of successfully completed bank rescue operations. Both Sony and Honda had difficulties in the 1950s, Yashica in 1974, and Yamichi Securities in 1965. In return for such loans, the bank expects to be consulted and kept informed of the firm's progress; it is not unknown to have daily visits from one's lead bank. Bank representatives also sit on the board of directors and serve on finance-related subcommittees.

The financial problems of Toyo Kogyo Motors (Mazda) in 1975 perhaps gives an indication of the rescue process. With the oil crisis and increased petrol prices, Mazda suffered an extreme drop in car sales, particularly in its rotary engine model exports to the United States. The company had financial difficulties as a result of the loss of sales and inventory buildups. Although Toyo Kogyo was not part of an industrial group, it had a "lead" bank relationship with Sumitomo. As the inventory problem began to build, the bank was kept informed of developments and increased lending commitments accordingly. However, as conditions continued to worsen, the bank also acquired shares in the company — eventually becoming its second largest shareholder and represented on the board of directors. This financial and management position was further strengthened by having certain bank staff serve as special senior "advisors" to Toyo Kogyo's top management. Eventually, due largely to bank and government support, Toyo Kogyo recovered and avoided bankruptcy.

More recently in 1977, Japan's eighth largest general trading company, Kanematsu-Gosho, required support by the Bank of Tokyo while

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[57] Peter F. Drucker, "Economic Realities and Enterprise Strategies," in *Modern Japanese Organization and Decision Making,* E. Vogel, ed. (Berkeley: University of California Press, 1975), p. 233. The tax deductability of interest payments and the restriction on the levels of bank shareholding are important reasons for this situation.

Kanematsu-Gosho in turn sorted out the financial problems of its Funabishi Steel affiliate. A similar but more important affiliate-related rescue operation involved the eventual absorption of Japan's ninth largest trading company, Ataka, by the then fourth largest trading company, C. Itoh. Ataka had lent more than U.S. $100 million to its Newfoundland refining project but problems with the venture coupled with over U.S. $50 million in losses in real estate, steel, and timber proved too much for the company and its banks. However, some suggest that had Sumitomo and Daiwa attempted to support Ataka in conjunction with its other banks, the rescue merger might have been avoided.

The point to be emphasized is that although most major companies near collapse have been rescued by their banks or affiliates, usually with government support, there is no legal obligation for a rescue to be conducted. Similarly, the commencement of a bank rescue operation need not always mean that the patient recovers; for example, both Maruyama (in 1976) and Eidai (in 1978) failed despite their bankers' efforts.[58] At one time, foreign bankers lent largely on the basis of a client's lead bank relationship, especially if the bank or its affiliates had some shares in the firm in question, with the knowledge that the lead bank felt morally responsible for the safety of the other banks' advances. Unfortunately, this has not always proved a valid assumption. For example, with the crash of a Tokyo Stock Exchange-listed air conditioner manufacturer, Nikon Notsugaka, its position as a Sumitomo Bank customer and its relative size were considered sufficient reason to ensure a rescue. However, the company reportedly had a poor relationship with its banks and, thus, despite its size, no one supported it. Similarly, in the case of the Kohjin crash in 1975 — a bankruptcy of over U.S. $600 million called the "worst financial collapse since World War II" — its bankers, Dai-Ichi Kangyo, withdrew support over the firm's losses in excessive land speculation and its generally weak position in pulp paper and chemicals. More recently, the Daiwa Bank withdrew its support in February 1978 and allowed the Y750 million bankruptcy of a plywood and prefabricated home producer, Eidai. In such cases, government-initiated support suggestions would have changed the bank's attitudes, but neither the company's employment and economic importance nor industry merited support. It is significant that among the list of recent major Japanese bankruptcies are the Hashihama Shipbuilding (U.S. $179 million), Hissei Shipbuilding (U.S. $146 million), Sagami Ship-

[58] William P. Bonds, "Business Failures and the Banks," *Euromoney* (July 1978): 120, suggests that ". . . after Japan emerges from the current recession we need not expect to witness the breakdown of bank support operations again."

building (U.S. $83.3 million), and Mie Shipyards (U.S. $66.7 million); all occurred while the government was promoting a contraction of shipbuilding industry and the redeployment of shipyard workers to more productive industries. In contrast, both the Hakodate Dock Co. and Sasebo Heavy Industries, due to their importance to the local economies of Hokkaido and Kyushu, received bank assistance.[59]

Because of the success of most rescue operations and few major, Western-style economic crashes, the Japanese developed a different outlook on financial risk than their Western counterparts. There are, of course, still many corporate failures in Japan. In 1977, for example, 18,471 firms with liabilities totaling Y29,781,000 million suffered bankruptcy, up sharply from 1976, when 15,641 firms with debts of Y22,658,000 million were forced out of business. Though most failures were of relatively new companies, overextension and excessive borrowing in the easy credit period preceding the oil crisis were the major causes for failure in 1974, and the continued economic recession has caused further increases.[60]

The Japanese government is aware of the potential danger of the banking system having excessive ties with any one company. Partially to prevent multiple bankruptcies, but more for antitrust reasons, banks were restricted from owning more than 10 percent of the shares of any customer, and by 1987 this should be reduced to a maximum of 5 percent.[61] In 1974, a lending limit was established: commercial banks can now lend amounts to one firm equaling up to 20 percent of its total shareholders' funds, and long-term credit banks up to 30 percent of their equity. Previously, it was not unknown for banks to lend as much as 40 percent to one company, and in 1974 possibly as many as thirty corporation advances over the lending limits were estimated with each major bank, even the long-term credit banks, involved in one or more situations. Some examples included Mitsui Bank's relationship with Mitsui Trading, and Sumitomo Bank's position with Toyo Kogyo. Because of the potential problems of an immediate enforcement of the

[59] Ibid.

[60] "Concern over Corporate Bankruptcy," *Focus Japan* (April 1975): 12.

[61] *Nihon Keeizai Shinbun* (16 April 1979). A recent study of Japan's thirteen city and three long-term credit banks found them the largest shareholder of 257 of the companies listed on the Tokyo Stock Exchange, many of which exceeded the 5 percent limitation. With Mitsubishi Bank, for example, some of its larger excess holdings included a 7.6 percent interest in the Mitsubishi Corporation, 7 percent of Ashai Glass, and 5.5 percent of Mitsubishi Heavy Industries. As of 1980, each bank's new investments will be limited to an amount equal to 5 percent of the bank's equity capital.

lending rule, there was a transition period of five years (1980) before being required to lend within the legal range.

As indicated, the banking relationships of Japanese companies have been particularly important since only in recent years have there been many alternatives. The domestic bond market was traditionally an unreliable and limited source of funding as a government-sponsored committee allocated the funds and set interest rates.[62] Those industries which the government wished developed received the money. During periods of easy money, bond issues were more popular as a source of corporate capital, but even then the volume was relatively small. Furthermore, as easy-money periods were not common in postwar Japan, they could not fully replace bank borrowings. Finally, there was always that feeling that if a corporation did not support its bank during easy-money periods, the bank would not support the company in times of tight money. In any event, the bank loans already tied up most available collateral, and the size of the bond issue was a function of the firm's collateral.

Besides government influence on the supply side of the bond market, the demand for new bond issues was not high. Since bond issues were only important in easy-money periods, their lower interest rates ensured capital losses at the return of tight money and high rates. Convertible bonds, which were partially protected through their equity conversion value, became popular with individual investors in the early 1970s, but as shown in exhibit 14, they did not develop into a major source of funding. Instead, the corporate bond market itself began to develop. Foreign capital markets too became an important source of Japanese corporate funding as did the impact loans (foreign currency loans for yen conversion and use) from foreign banks. Even some equity capital has been raised overseas through depository receipts (DR) issues.

Within Japan, however, share issues continue to be a limited means of raising capital. One of the basic drawbacks to new share issue raisings is the par value rights issue and dividend rate phobia.[63] Over the years, Japanese investors have developed a desire for a nominal dividend return of 10 to 20 percent of their share's par value. It is also traditional to develop a relatively fixed dividend payout ratio. When increased earnings force the dividend to exceed the 20 percent range, the cor-

[62] Barnet, Price, and Gehrke, "Japan Fertile Ground," p. 36.
[63] M. T. Skully, "Par Value — an Australian Fetish," *Australian Accountant* (January-February 1976); the basic discussion of the Australian problems can be well applied to Japan.

Exhibit 14. Financing Japanese Corporations

	Domestic				Y Billion	Overseas ($ million)			Y billion
	Bonds (gross)		Stocks (gross)			Bonds (gross)			
Fiscal Year	Straight	Convertible	Par	Others	Loans & discounts	Straight	Convertible	DRs (gross)	Impact loans net
1973	854.0	410.3	372.3	359.1	17,082.5	35	—	4	422.3
1974	986.7	283.5	400.7	211.8	13,007.9	376	70	—	824.3
1975	1,520.4	331.0	675.7	226.7	14,896.0	1,100	604	75	795.6
1976	1,166.4	55.5	338.5	472.9	14.560.6	969	526	326	380.4
1977	1,240.8	162.5	279.4	430.0	10,562	946	840	224	−19.4 (est.)
1978 (April-June)	321.0	88.0	148.1	114.9	n.a.	212	290	—	—

Source: Bank of Japan, Bond Underwriters Association of Japan, Nomura Securities as cited in *Euromoney* (September 1978): 17.

poration normally issues enough shares to bring the dividend rate into line. The new shares are either sold or issued freely to the shareholders. The problem with new share issues is that shareholders prefer rights issues, and until 1972, offerings to the general public were somewhat unusual. In addition to preferring rights issues, Japanese investors want the shares sold at their "par" rather than market value. The combination of the dividend rate and "rights issues at par" market preferences made share issues an extremely expensive source of funds for most corporations. This latter situation is beginning to change;[64] exhibit 15 indicates that the amounts raised from stock issues made at other than par exceeded the amounts raised at par in both 1976 and 1977. As more Japanese companies are able to sell new shares at nearer to market prices, Japanese equity issues should become more important and help to increase the relative importance of shareholders' funds in the average balance sheet.

Exhibit 15. Financial Sources for the Corporate Sector

		(Figures in Y100 million)		
Fiscal year	*1974*	*1975*	*1976*	*1977*
Stock issues	5,840	8,900	6,342	5,687
Bond issues	6,428	15,225	9,339	8,182
Trade credit	1,519	6,087	18,511	(15,619)
Other borrowing	83,853	56,047	39,190	10,152
External capital	97,640	86,259	73,382	8,402
Internal capital	40,294	31,163	44,188	44,027
	137,934	117,422	117,570	52,429

Source: Bank of Japan, 1979.

A more significant factor in any changes to Japanese corporate gearing is the declining growth rate of the Japanese economy. The slower growth is also reflected within Japan's corporations, and now, at least from the aggregate figures in exhibit 15, Japanese companies require less overall funding. As a result, internally generated funding has increased from only 29.2 percent in 1974 to some 84 percent in 1977. In terms of corporate structure, the trend is even more dramatic as the

[64] More recently there have been indications that the dividend rate attitude will change ". . . due to the recent popularity of market value issuing and the advice by the Ministry of Finance, the stable dividend rate policy will be substituted by the stable pay out policy in the near future," Satoshi Kuribayashi, *A Financial Analysis of Japanese Industries,* A.J.E.R.R.P. Research Paper (Canberra: Australian National University, June 1977), p. 41.

relationship between "own" versus "borrowed" capital, as shown in exhibit 16, has seen borrowed capital decline from 66.6 percent to only 5.2 percent of total corporate funding.

Exhibit 16. Corporate Funding

Fiscal year	*1974*	*1975*	*1976*	*1977*
Own capital (%)	33.4	34.1	43.0	94.8
Borrowed capital (%)	66.6	65.9	57.0	5.2
	100.0	100.0	100.0	100.0

Source: Bank of Japan, 1979.

This reduced dependence on external borrowing is not really new and despite the aggregate statistics, many Japanese companies — especially firms such as Honda or Sony which have their shares (depository receipts) listed on foreign exchanges — have tried following debt-to-equity ratio policies more in line with Western traditions.

While one might anticipate the variance in leverage as a function of business risks (that is, the higher its business risk exposure, the less financial risk a firm would incur), there are still considerable differences in financial policies within the same industry. One study found in industries such as automobiles, appliances, and radios and TVs, the leading companies — the ones with the highest market share — had the lowest debt ratios while the "weaker" companies within the industry had high debt ratios. The study concluded that "the leading companies are paying off debt while the weaker companies are borrowing heavily."[65]

A more recent study suggests that the lower growth rates experienced during the recession magnified these differences. An examination of 868 nonfinancial companies found that the number of companies whose equity (net worth) ratios exceed 50 percent of total assets increased from fifty firms in 1977 to seventy firms in 1978, while at the same time it also found that ". . . many companies are ridden with enormous deficits and excessive liabilities, and quite a few of them are on the verge of bankruptcy."[66] The companies with better equity positions ranged from 53.96 to 86.13 percent of total assets and include such well-known firms as Pioneer Electric (71.72 percent), Fujitec (66.31 percent), Matsushita Seiko (64.55 percent), and Toyota Motors (55.53 percent).

[65] Anthony J. Haabgood, *Debt, Growth and Competitive Position: A Re-Examination of Japanese Corporate Financing,* part 2 (Tokyo: Boston Consulting Group, 1975), p. 1.

[66] *Oriental Economist* (October 1978): 15-17.

Another interesting difference is reflected between corporations belonging to the major industrial groups with bank affiliations and those of the more independent groups. As shown in exhibit 17, the debts of the bank group companies have a much higher dependence on bank financing than those without affiliation. Similarly, as the economic conditions have become worse, there is an even wider gap between the two groups.

Exhibit 17. Debts Per Employee of Group Manufacturing Companies

	1965	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*
Bank-centered groups	280	560	680	730	800	960	1,130
Independent groups	240	370	400	390	400	480	530

Note: Bank-centered groups: the Sumitomo group (nine manufacturing firms), the Mitsubishi group (sixteen), the Mitsui group (thirteen), the Dai-Ichi Kangyo Bank group (eighteen), the Fuyo group (eighteen), and the Sanwa group (twenty-two). Independent groups: the Nippon Steel group (twenty manufacturing firms), the Toyota Motor group (fifteen), the Nissan Motor group (eighteen), the Hitachi, Ltd., group (eighteen), the Toshiba Electric group (twelve), and the Matsushita Electric Industrial group (thirteen).
Source: Nikkei Sangyo Shimbun, as cited in *Focus Japan* (January 1977): 7.

PROSPECTS FOR THE FUTURE

Japanese companies as a whole have already reduced their external funding and in some cases have even repaid previously existing debts. Whether this trend will continue, however, depends on the rate of economic growth in the future and the supply of funds from the other sectors of the economy.

The most significant changes have already occurred within the government sector, and today as well as in the future, the government is a net user rather than a supplier of funds. Especially during the recent recession, the government began to use selected public spending as a means of stimulating the economy instead of running a traditionally balanced or surplus budget. To stem its increasing deficit, the public sector, in addition to taxation financing, now borrows directly from the market through bond issues. In 1978, it raised some Y10.9 trillion compared to hardly any in 1973.[67] To finance its ambitious social and infrastructure expansion plans, the government may turn increasingly to borrowing as a source of finance. Local governments will particularly need capital funds for their local water and sewage treatment plants program. The latter, due in part to a lack of previous treatment facili-

[67] Ministry of Finance, *The National Budget 1978-79* (Tokyo: Ministry of Finance Printing Bureau, 1978), p. 59.

ties, is also caused by the Japanese consumer's demands for home ownership.

The trend toward home ownership also reflects a new awareness of the average Japanese of debt financing both for home and other consumer purchases. The private banking system has already revised its "business only" orientation to cater to the new demand, and more specialized housing loan companies have developed within both the private and public sectors. This availability of financing and a more favorable attitude toward debts should cause the household sector to increase its relative importance as a user of investment capital and, in the process, divert some funding previously available to corporations.

Within the corporate sector, the banks can be expected to assume a less important financial role than in the past. Restrictions on their equity holdings and loans to customers should reduce the banks' importance as a major source of finance and encourage competition. The larger banks have already adopted an aggressive policy toward smaller companies and many now directly service their previous trading company-financed customers. The development of foreign and other financial institutions and markets, such as the call money market, has added to the growing competition in supplying the corporate market.[68] Meanwhile, on the demand side, companies now operate with few external borrowings due to the recession and many are retiring previous debts and, where possible, are diversifying their sources of finance. As both corporate and investor attitudes on corporate finance become more westernized, common share and convertible bond issues should become an increasingly favorable means of funding and ensure that these methods continue as important funding sources in the future.

In conclusion, the highly leveraged Japanese industrial corporation was a product of Japan's financial and industrial development, particularly within the postwar period. The rebuilding of the country's economy and rapid economic growth required capital investment far greater than the corporations' internally generated funds. A relatively underdeveloped capital market forced firms to rely on the banking system for funds, and the banks in turn, through the Bank of Japan's overloan program, met the requirements. The financial risk this involved, however, was partially offset with the knowledge that in bad times one's lead bank might come to the rescue, often with government backing, and the firm could then trade out of its difficulties. This support helped the

[68] "Japanese Survey," *Euromoney* (March 1979), provides good coverage of the extent of foreign involvement and overseas capital raisings in Japanese finance.

industrial corporations, especially the major export-oriented firms, to increase production and constantly improve their plants and equipment. The continued buildup of borrowed funds resulted in high debt-servicing charges which in turn reduced corporate profits and the availability of internal funding. It was only with the liberalization of the economy, particularly the entry of foreign banks and access to international capital raisings, that corporations were able to diversify their source of funding. More recently, a slower growth rate has allowed internally generated funding to "catch up," and such funds now comprise the majority of corporate funding. The recession, however, has had another effect, an increased level of major bankruptcies, and in recent years a number of major listed companies went bankrupt or were forced to merge in spite of their banking relationships. The government also has taken a more selective attitude toward corporate rescue operations. These factors, together with the new restrictions in the size of bank advances and a more developed capital market, all argue for a reduced corporate dependence on bank financing. In the short run in particular, the levels of borrowed capital can be expected to decline, but as Western economies recover, bank advances will resume much of their original importance. In the long run, however, Japan's more moderate growth rate and more diversified funding sources should cause bank advances to become relatively less important in the future.

Accounting Theory and History—Lessons to Be Learned

G. D. POUND and B. M. POLLARD*

Accounting principles form an integral part of the accounting information system. The information content of financial reports is directly related to the utility that accounting principles have to the information needs of "users."[1] This paper proceeds on the presumption that the objective of accounting as a service discipline is to be derived from a basis of user utility. The need for a set of consistent accounting principles, derived from a user utility-based theory, is currently unfulfilled. This is symptomatic of the process by which accounting principles have been developed. The history of accounting principle development, especially in the United States, the United Kingdom, and Australia, has proceeded without due regard to this principle. This may be one important factor underlying the erosion of the credibility of corporate financial reporting and the accounting profession.

This paper provides a summary of the role of theoretical input into accounting principle development to date. Reference to selected events in the United States, the United Kingdom, and Australia rely heavily

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[1] While there appears to be a consensus that one of the primary objectives of accounting is to provide relevant information to "users" for the purpose of making economic decisions, "users" have been identified as a diverse group, with diverse decision and information requirements. The debate on users and their information needs is well documented and will not be continued here.

on the work of Zeff[2] for the period up to 1971 to 72, and from various other sources for more current events. It has been stated that "remembering the past usually assists in understanding the present and explaining the future."[3] This paper will demonstrate that the accounting profession has learned little from the past with respect to the process of principle/standard development. Lee summarizes it thus: "The problem of accounting must be placed within a wider perspective, . . . The most relevant context appears to be the historical one, in which the problems of today can be seen also to have been the problems of yesterday."[4]

THE ROLE OF THEORY AND RESEARCH

There have been varying points of view as to the role of theory in the development of accounting. A study of the history of accounting principle development leads to the conclusion that theoretical input to the process has had little direct impact on accounting development. The predominance of explanatory theories has been inhibitive to real progress. At best, the theories assist with an understanding of current practice and reduce the incidence of inconsistent practices. This led Henderson and Peirson[5] to conclude that accounting research does matter — "but not very much."

A further impediment to progress via research has been the mutual excommunication of researchers and practitioners. The schism influence has been well documented. Practitioner dominance supported the pre-1970 attitude which required focusing on a deficiency in contemporary accounting, necessitated as a reaction to some financial crisis. The resultant ad hoc approach produced a plethora of accounting principles formalized and legitimatized as "generally accepted accounting principles." Development as a consensus of practice has been a consensus between groups within the profession, not of the profession itself.

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[2] S. A. Zeff, *Forging Accounting Principles in Five Countries: A History and an Analysis of Trends* (Champaign, Ill.: Stipes Publishing, 1972); idem., *Forging Accounting Principles in Australia* (Melbourne: Australian Society of Accountants, 1973).

[3] Powell, "Putting Uniformity in Financial Accounting into Perspective," *Law and Contemporary Problems* (Autumn 1965): 674-89, reprinted in *The Development of Accounting Principles — A Study of Diversity*, ed. G. D. Pound (Armidale, Australia: University of New England, 1979), p. 124.

[4] T. A. Lee, "The Evolution and Revolution of Financial Accounting: A Review Article," *Accounting and Business Research* (Autumn 1979): 292.

[5] S. Henderson and G. Peirson, "Does Accounting Research Matter," *Accounting and Business Research* (Winter 1978): 8.

Accounting principles are not based on some underlying truth or natural law, but rather are established through consensus, often as a compromise between conflicting interests. As the qualifying words "generally accepted" imply, they rely on a broad base of acceptance, and not on objective proof.[6]

The lack of substantial impact upon accounting practice by researchers is not due entirely to the practitioner/researcher schism. Researchers have yet to formulate a unified theory. This lack of success has been attributed to (1) a failure of researchers to communicate their proposals effectively; (2) inadequate recognition that the adoption of new accounting systems is a reflection of the political, economic, and social environments; and (3) lack of general agreement on the purpose of accounting statements.[7] Many theories also fail to achieve acceptance because they lack external verification and/or internal consistency (to be discussed later).

Watts and Zimmerman[8] document and promote the view that the role of theory/research in the past has been to support a particular viewpoint suggested by a particular pressure group. Accounting theories become "political." They are "excuses" for self-interest groups, or reactions to government and/or public pressure. Watts and Zimmerman conclude:

> In our view, accounting theories have had an important role in determining the content of financial statements — although it might not be the role envisioned by the theorists. Instead of providing "an underlying framework" for the promulgation of "sound" financial reporting practices by standard-setting boards, accounting theory has proven a useful "tactic to buttress one's preconceived notions."[9]

Recent attempts to overcome the explanatory role of theory have come from several sources. Unfortunately, there is inconsistency in the suggested alternative. It could be said that there is a sub-schism within a schism group.

> . . . it is generally concluded that financial accounting theory has had little substantive, direct impact on accounting practices or policy formulation despite half a century of research. Often the lack of impact is attributed to basic methodological weakness in the research. Or, the prescriptions offered are based on explicit or implicit objectives which frequently differ among writers.

[6] M. Calpin, "Understanding Audits and Audit Reports" (Canadian Institute of Chartered Accountants, 1979), p. 7.

[7] S. Henderson and G. Peirson, *An Introduction to Financial Accounting Theory* (Melbourne: Longman Cheshire, 1977), p. 141.

[8] R. L. Watts and J. L. Zimmerman, "The Demand for and Supply of Accounting Theories: The Market for Excuses," *Accounting Review* (April 1979): 273-301.

[9] Ibid., p. 300.

Not only are the researchers unable to agree on the objectives of financial statements, but they also disagree over the methods of deriving the prescriptions from the objectives.[10] (emphasis added)

These disagreements themselves downgrade the role of theoretical input into accounting and accentuate the gap between the two primary schism groups.

The divisions within and between groups are given a sociological perspective by Gambling.[11] He suggests that social change and reactions to change are influential in the current problems facing accounting:

If one accepts the thesis that accounting theory reflects the "culture" of a group, it would follow that social change would produce a change in a nation's accounting theory . . . there is likely to be a lag between this change in the generally accepted theory and the development of methodologies needed to reflect it, and that the turbulence presently experienced by the accounting profession is due to this discrepency.[12]

The lack of consensus between and within schism groups has led to a multiplicity of theories to explain a multiplicity of accounting methods. Consensus as a profession requires a framework for decision making on principles. At the moment, the dilemma of how to proceed is confused even further by uncertainty as to the level of principles that theory should be concerned with. Three levels of principles have been identified:

(i) pervasive principles, which relate to financial accounting as a whole and provide a basis for other principles;
(ii) broad operating principles, which guide the recording, measuring and communicating process of financial accounting, and
(iii) detailed principles, which indicate the practical application of the pervasive and broad operating principles.[13]

Because of the inconsistency at this level and the other problems mentioned earlier, researchers proceed at different levels, and practicing accountants cannot accept theoretical input. Current theory does not enable practicing accountants to conclusively explain practice, nor does it proceed in such a way that short-run practitioner issues can be immediately solved.

The lack of agreement on the objectives of financial statements (both within and between schism groups) combined with the explana-

[10] Ibid., pp. 273-74.
[11] T. Gambling, *Beyond the Conventions of Accounting* (London: MacMillan Press, 1978).
[12] Ibid., p. 46.
[13] Accounting Principles Board, Statement No. 4, *Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises* (New York: APB, 1980), par. 141.

tory role of theory is inconsistent with accounting principles based on user utility, except to the extent that principles and explanatory theory have been accepted by practitioners and management as influential internal user groups.

THEORY DEVELOPMENT

An analysis of theory development may explain why many of the abovementioned problems exist. Even if given an agreed objective, a theory needs to be *internally consistent* and *externally verified* to achieve acceptance. A theory, viewed as a set of logically related concepts, is intended to explain a real-world phenomenon. The explanation may be in terms of "what is" (explanatory) or "what should be" (normative).

The constructs of the theory are deduced from its initial hypotheses, the derivation of these hypotheses being nonlogical. Once the initial hypotheses have been derived, the logical constructs are deduced and tested against the real-world phenomena they purport to represent. If the constructs are validly deduced, according to the rules of logic, the theory is *internally consistent* (see exhibit 1).

If the predictions deduced from the constructs replicate actuality, the theory is *externally verified* (exhibit 1), although philosophically, "truth" is never known. Because the derivation of the initial abstract hypotheses is nonlogical, the testing of the deduced predictive constructs is important.

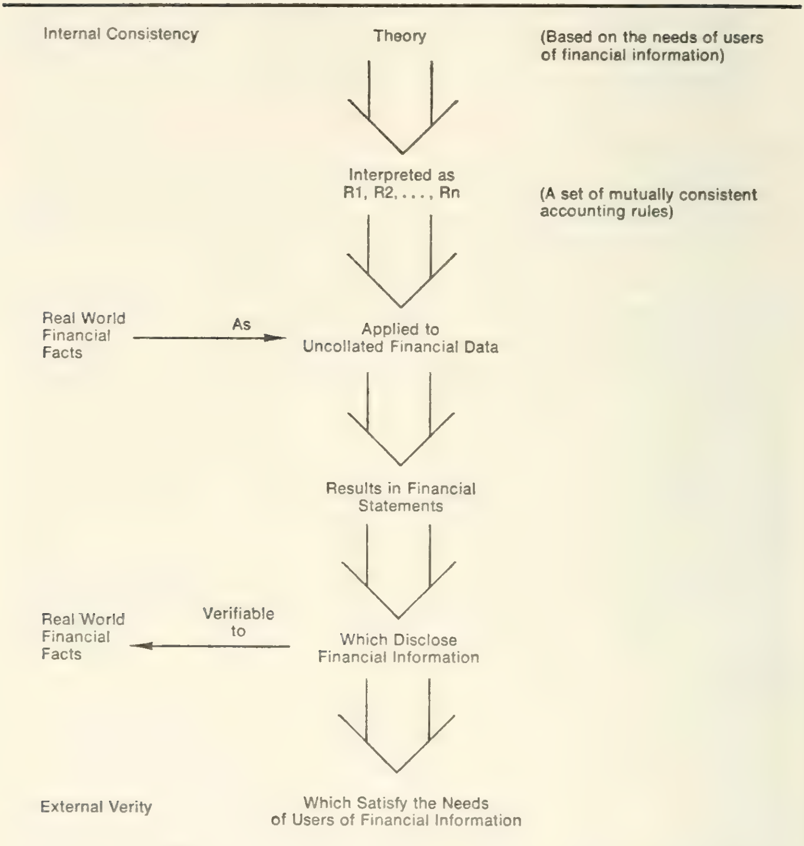
The external verity of an accounting theory may be established in two ways. First, the financial information must satisfy the needs of users, and second, it must be confirmed by reference to actual financial facts. History has demonstrated that an accounting theory cannot be directly corroborated by reference to real-world facts. The satisfaction of the user need is not achieved by the theory itself, but by the resultant financial information.

The critical elements of the system are the theory and the resultant information:

> ... certain beliefs, evidence and reasoning as to what constitutes knowledgeable investor action may be made explicit. In this way justifiable choice may be made from among any different views as to the necessary financial data, and related proposed rules, to aid informed action. Faulty logic may be identified. Fallacious views about relationships between real world phenomena may be recognised; so too may dubious views about such relationships.[14]

[14] E. J. Evans, New England Account Research Study No. 3, *Prospectuses and Annual Reports: An Historical Look at Rule Development* (Armidale, Australia: University of New England, 1974), p. 77.

Exhibit 1. Internal Consistency/External Verity



Without an objective, the system would start with rules and end with financial statements. In this case, there is no attempt to gain either type of external verity. This approach has been formalized in accounting history and perhaps is a casual variable in the vulnerability to criticism of accounting practice.

Stamp suggests that mere rules and conventions

> . . . may characterise the early stages of development of a subject . . . but as maturity is reached the rules and conventions are supplanted by more basic concepts, "principles" or theories from which they are derived by a process of deductive logic.[15]

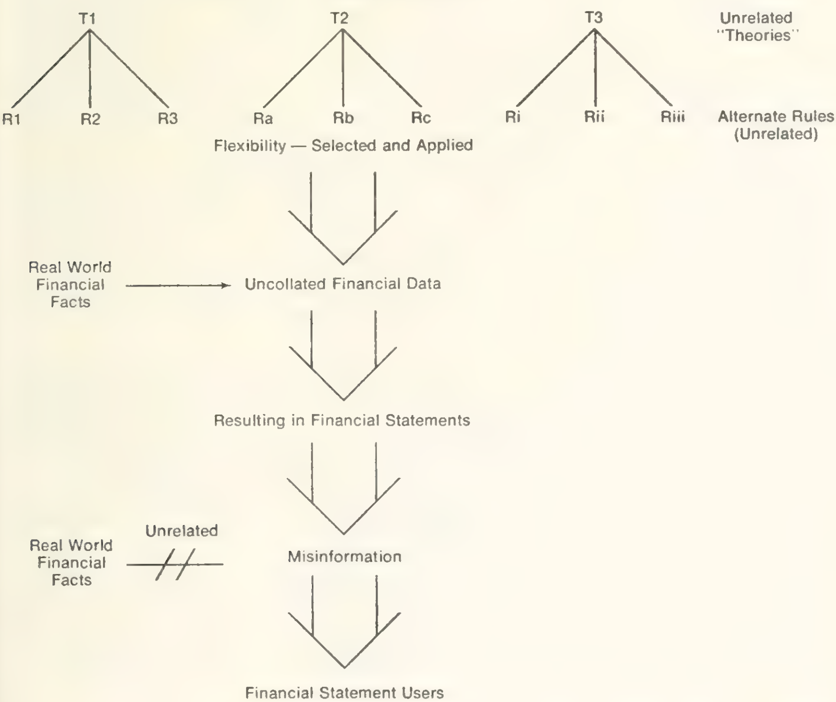
[15] E. Stamp and C. Marley, *Accounting Principles and the City Code: The Case for Reform* (London: Butterworths, 1970), p. 110.

Because the purpose or objectives(s) of accounting has not been incorporated into theory construction in accounting, many of the so-called generally accepted accounting principles derived from theory are, like the theories, inconsistent. This can be seen as symptomatic of the lack of internal consistency and external verity (see exhibit 2).

In essence, the process of rule development has been pragmatic and political — political in the sense of "lobby" and "pressure" groups within the profession seeking self-interest solutions to specific problems. This is analogous to what Solomons has predicted in terms of external politics when he makes the following observation:

> Today, to judge from current discussions of the standard-setting process, accounting can no longer be thought of as nonpolitical. The numbers that acountants report have, or at least are widely thought to have a significant impact on human behavior. Hence, the process by which they are made is said to be political. It is then only a short step to the political arena, by counting heads and deciding accounting issues by some voting mechanism.[16]

Exhibit 2. Accounting Principles and the Lack of Internal Consistency and External Verity



[16] D. Solomons, "The Politicization of Accounting" *Journal of Accountancy* (November 1978): 65.

To a lesser extent, this is representative of the profession's approach to principle development, except that (as revealed by the Metcalf Report) the influence of corporate management through the "Big Eight" holds the voting power, at least in the United States.

In summary, accounting principles

> ... have developed from a consensus of opinion, or from a combination of custom and compromise among accountants, their status being the project of decades of revision and refinement. The efforts of accountants have, however, been directed toward the solution of specific problems rather than the broader problem areas.[17]

HISTORICAL ROLE OF RESEARCH

The United Kingdom

The first evidence of "research" in the United Kingdom was in 1935 when the Society of Incorporated Accountants and Auditors established a "research committee." The committee, prior to its demise in 1957 when the society was absorbed by the English, Scottish, and Irish institutes, produced a journal and several papers on various topics. A major contribution by the members of that committee in 1952 was the establishment of accounting as a university discipline. In the long run, this indirect input to accounting research may prove to be more influential than many of the more direct attempts, since university accountants have provided stimulus to professional activity.

During this period, the Institute of Chartered Accountants in England and Wales (ICAEW) conducted little research and was primarily an administrative body. In the early 1940s, there were disagreements between accountants in industry and public practitioners. These were exacerbated because of the lack of authoritative accounting standards.

In 1942, the ICAEW created a Taxation and Financial Relations Committee (T. & F. R.) later renamed the Technical Committee. In keeping with the lack of theoretical input into accounting development at that time, the committee was to prepare pronouncements on accounting principles and offer guidance to members on what was considered to be *best practice*. Exhibit 3 presents an example of the restrictive environment within which this activity took place. Because each subject was considered individually, and with no opportunity for

[17] G. D. Pound, "The Failure of the Financial Accounting System," *Accounting Education* (November 1977): 20.

comment from those outside the various committees, the resulting recommendations were ad hoc. The procedures for drafting recommendations further reflect the lack of cohesion and theoretical input (see exhibit 4. If there was any semblance of research input and theoretical application, the likelihood of internal consistency and external verity of output was remote.

These procedures continued, and by 1969 twenty-nine recommendations were issued. The system perpetuated the pragmatic approach to the development of accounting principles. The recommendations, having been prepared by a system of committees adopting a consensus approach, were usually broad. Needless to say, they were not based upon a theoretical framework, nor did they attempt to achieve any overall objective. The result was an unsatisfactory degree of flexibility.

A concession to a more fundamental approach was the formation in 1964 of a research committee which was to commission projects of a fundamental nature by academics. The committee was given the authority to publish documents without the express consent of the council of the ICAEW. The late injection of theoretical input could not stave off criticism of accounting in general or of the institute's recommendations during the late 1960s. The criticism leveled at the profession led to the institutions of the city of London and the government to exert pressure for an improvement in the development of accounting principles. While this led to action by the profession, there was no sound basis upon which to initiate real progress. As a result of this, the institute issued a Statement of Intent on Accounting Standards in 1970, which included proposals for changes in the procedures under which accounting standards were to be framed. This led to the establishment of the Accounting Steering Committee (ASC) in January 1970. Again, the approach was pragmatic. Fundamental in-depth research was omitted from the new program. A "best current practice" approach was adopted with pronouncements being influenced by U.S. and Canadian thoughts. Of late, the ASC has been obliged to consider the activities of the International Accounting Standards Committee (IASC) and the Union Europeene des Experts Compatables, the EEC's accounting body. These external influences are also subject to a pragmatic approach to accounting development. Weetman summarizes the ASC pronouncements as follows:

> ... being concerned with the finer details of accounting for the results of commercial enterprises rather than with the fundamental reappraisal of the

Exhibit 3. English Institute — Procedure for Proposed Recommendations

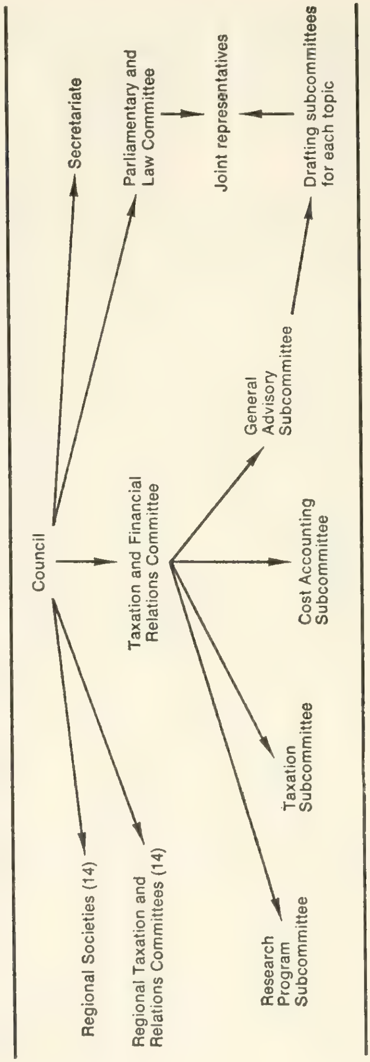
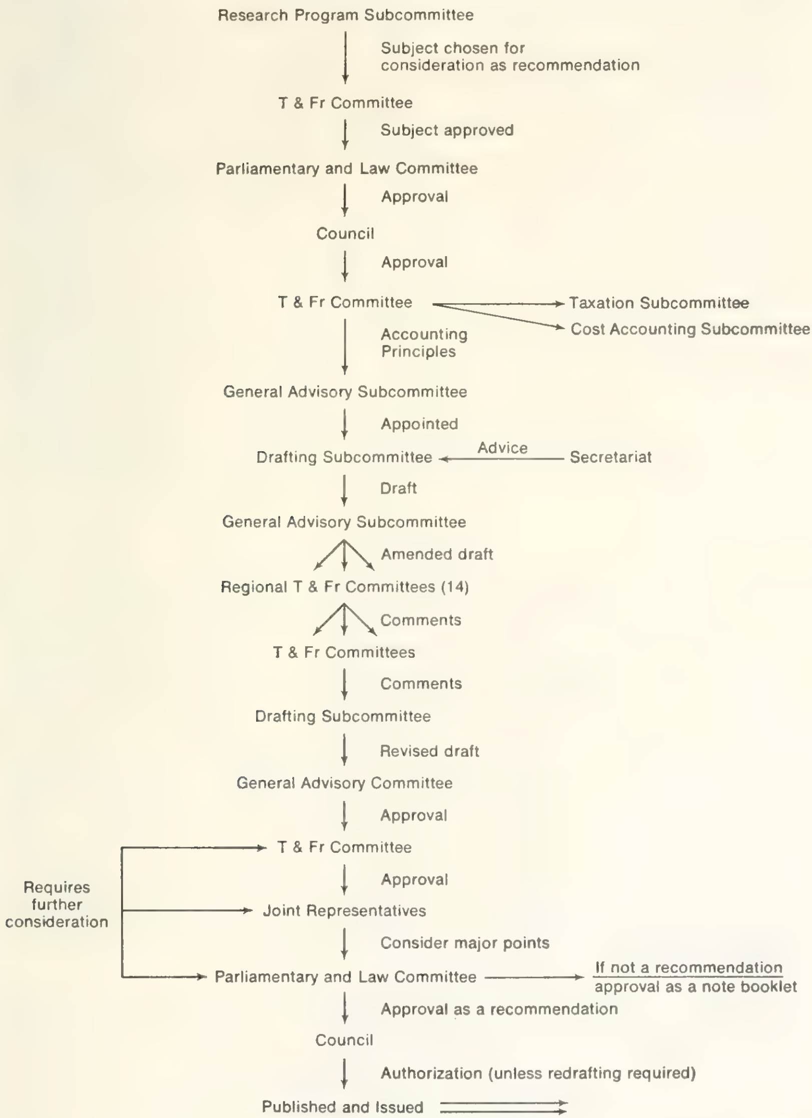


Exhibit 4. English Institute — Recommendation Drafting Procedure



measurement of economic activity by reference to the real meaning of such activities.[18]

The current U.K. system for developing accounting standards is depicted in exhibit 5. The ASC has now been reconstituted as a joint committee of six accounting organizations[19] which now form the Consultative Committee on Accountancy Bodies (CCAB).

However, the process is still one of consensus. It is difficult to see how internal consistency can be achieved. Many of the problems that existed in the process depicted in exhibits 3 and 4 still exist. There is no objective from which to begin or evaluate projects. The research committees and the organization or individuals involved would find it difficult to ensure internal consistency, having no established conceptual framework or objective. Comments from "users" are ad hoc and evaluated by individuals other than the initial researchers. Therefore, while there is much wider scope for "user" input, this is at a level consistent with pressure group tactics. There is no guarantee that the external verification is representative of all, or even the intended, user groups.

UNITED STATES

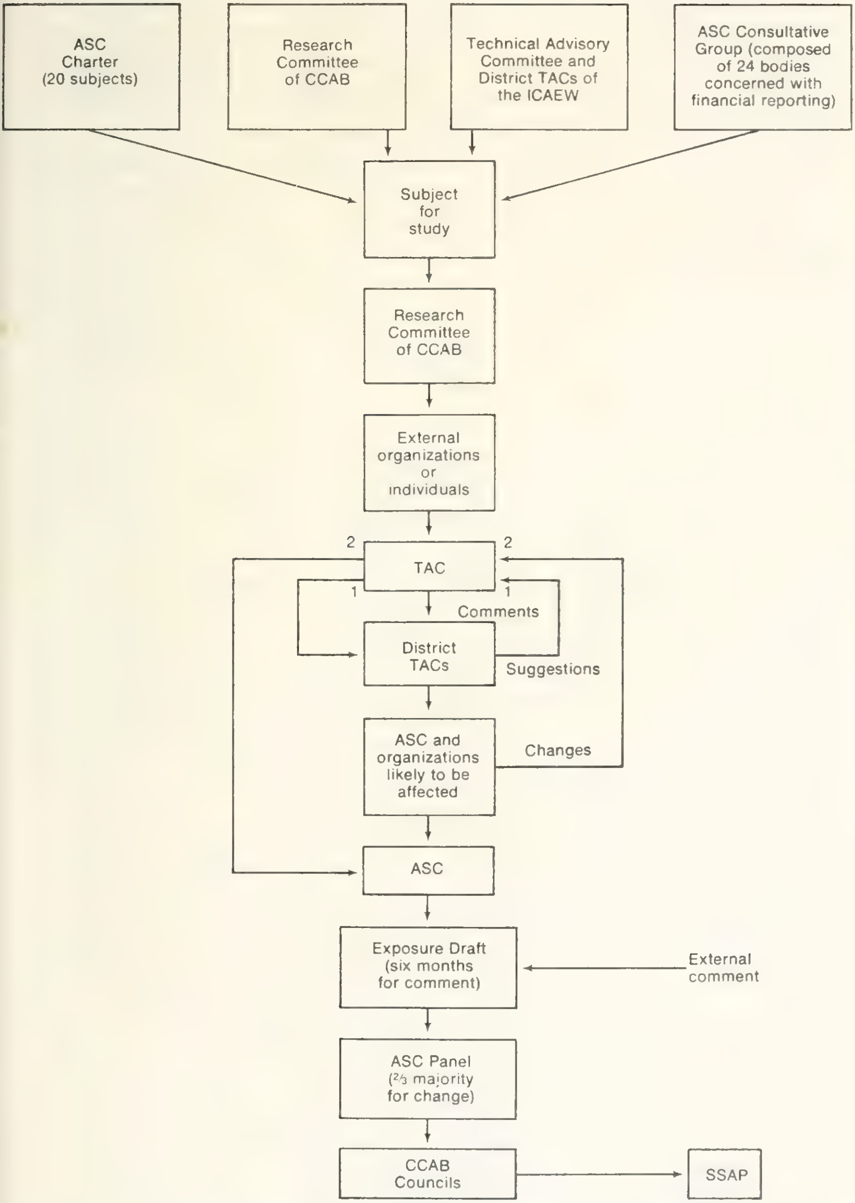
Until the early 1930s, the professional accounting organizations in the United States offered practitioners little guidance on accounting principles. The significant event at that time was the formation of the Securities and Exchange Commission (SEC). The Securities Act of 1934 gave the SEC authority to administer securities legislation, including authority over accounting practice. While the SEC has allowed the accounting profession to develop and enforce accounting principles, it has no doubt provided a stimulus to the profession to ensure progress. This type of government-induced stimulus has been advocated three times since the beginning of the 20th century. For comments concerning the Federal Trade Commission, the SEC, and the congressional subcommittees of the 1970s, see the discussion of the SEC and the FASB on pages 114 and 115.

During the period from the 1930s to the 1970s, the progress, in terms of consistent accounting principle development, has been limited. During this period, the development of accounting has been split between

[18] P. Weetman, "Accounting Standards: A Pause for Reflection," *Accounting and Business Research* (Summer 1977): 169.

[19] The Institute of Chartered Accountants in England and Wales, the Scottish and Irish Institutes of Chartered Accountants, the Association of Certified Accountants, the Institute of Cost and Management Accountants, and the Chartered Institute of Public Finance and Accountancy.

Exhibit 5. United Kingdom — Accounting Standards Procedure[20]



[20] Adapted from N. Blake, "U.K. and U.S. Standards — A Comparison," *Accountancy* (September 1979): 51.

two primary groups: the American Institute of Certified Public Accountants (AICPA) and the American Accounting Association (AAA). The fundamental difference in philosophy of these groups was evident from the beginning. For example, in 1935, the AAA expanded its activities to include the sponsorship and encouragement of research, although many of its statements were piecemeal attempts to overcome current problem areas. The AICPA Committee on Accounting Procedure (1938) did little or no research of a fundamental nature in preparing its Accounting Research Bulletins. Again, it was an ad hoc approach concerned with treating accounting problems on a piecemeal basis. There was no attempt to construct a theoretical accounting framework upon which advocated rules and procedure could be based. It was not until the 1950s that further activity took place. Again, the fundamental difference in the approach to the problem by the AICPA and AAA was evident.

The AAA established the Committee on Concepts and Standards underlying Corporate Financial Statements to revise the previous statements on accounting. The committee released a statement in 1957 which stressed the need for basic concepts to serve as a foundation for accounting theory.

In 1959, the AICPA established the Accounting Principles Board (APB) whose objectives were to establish, pronounce, and enforce generally accepted accounting principles; to eliminate, or at least narrow, the range of permissible alternative accounting practices; and to stimulate the resolution of troublesome issues. These functions involved the elaboration of a conceptual framework and development of specific accounting practices based upon this framework.

There was an attempt in the late 1950s to establish a theoretical framework of accounting. In 1959, the Accounting Research Division (ARD) was established to conduct intensive research into the development of accounting principles. The ARD commissioned Accounting Research Studies to be made by independent investigators. These studies were not official pronouncements of the AICPA but rather documents to provide a basis for discussion and experimentation. They did, however, represent the first attempt by the AICPA to support recommendations by deductive reasoning. The attitude of the profession at that time is reflected in the fate of Accounting Research Studies 1 and 3.

Once a research study had been exposed and comments received, the APB took over. It decided whether a pronouncement was to be made on the subject and, if so, what form it should take. ARS 1, "The Basic Postulates of Accounting" and ARS 3, "A Tentative Set of Board

Accounting Principles for Business Enterprises" were published in 1961 and 1962, respectively. They were largely the work of Maurice Moonitz, with Robert Sprouse collaborating on ARS 3. The APB found these two basic research studies to be too radically different from current practice to be considered as pronouncements, demonstrating the lack of an overall objective in the APB program. The APB wished to release pronouncements of "best current practice," thus rejecting ARS 1 and ARS 3 as failing to represent extant accounting principles. The rejection of these research studies led the APB back to the familiar path of framing ad hoc recommendations for specific problems as they arose. No fundamental principles upon which opinions could be based were adopted.

The abandoning of the deductive approach in favor of a pragmatic approach was reflected in later studies which were ad hoc and lacking a common theoretical foundation. This is evidenced by ARS 7, "Inventory of Generally Accepted Accounting Principles for Business Enterprises," which summarized the pronouncements of the APB. During this period, the APB emphasis became increasingly pragmatic, and by the late 1960s, the conceptual role was forgotten. The program of the APB was dominated by the practical necessity of gaining a two-thirds consensus. The resultant opinions were therefore compromise statements.

The AAA persisted with a different approach and in 1964 established a committee to develop a unified statement of accounting theory. This statement, published in 1966 as "A Statement of Basic Accounting Theory," emphasized the importance of providing relevant financial information to the users of external reports to satisfy their needs. This at least provided a broad basis upon which to establish the internal consistency and external validity of any theoretical input.

Due to mounting controversy in the early 1970s, the APB was subject to review. The criticisms and deficiencies of the APB were summarized by the AAA. They included a lack of an underlying philosophy as a basis for accounting principles; insufficient representation of parties interested in accounting principles; the element of compromise in establishing standards which allow for incoherence and a lack of logic; the low quality of the APB's supportive research program which made no attempts to test the effects of opinions prior to their issuance: and the AICPA's failure to enforce and justify the APB's opinion series.

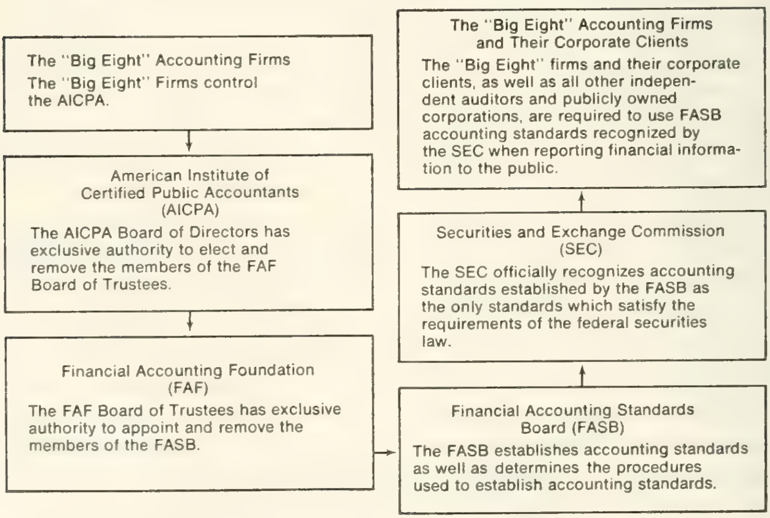
As a result of this and other pressures, the AICPA established two study groups. The Wheat Study Group was to investigate the procedures for establishing accounting principles, while the Trueblood Study Group was to refine the objectives of financial statements. In response to the

findings of the Wheat Committee Group, the AICPA established the Financial Accounting Standards Board (FASB) to replace the APB (1973). The FASB was charged with the responsibility of developing standards of accounting and reporting which would maintain the confidence of users of financial information. One of the first tests was to prepare a "Conceptual Framework for Accounting and Reporting." This project was completed in 1976 when the FASB published the "Conceptual Framework for Accounting and Reporting."

Despite this apparent progress, the FASB has not avoided criticism. Critics from outside the profession see the FASB continuing the pragmatic approach of the APB. For example, the Metcalf Congressional Inquiry criticized the independence of the FASB, believing that it had not operated in the public interest. Exhibit 6 illustrates the concern about the FASB as an effective accounting organization.

Still further pressure has been exerted by Congressman Moss, chairman of the House Subcommittee on Oversight and Investigation. This report came as a shock to the accounting profession since the committee was established to review government operations. The report on

Exhibit 6. Control of the "Big Eight" Accounting Firms and the AICPA over Accounting Standards Approved by the SEC[21]



[21] Summary of "The Accounting Establishment: A Staff Study," *Journal of Accountancy* (March 1977): 112.

the SEC, however, produced an attack on the FASB. It was stated that the FASB had "... accepted virtually nothing toward resolving fundamental accounting problems."

The bill which Congressman Moss introduced in Congress still hangs over the FASB, threatening that performance that is too slow and unsatisfactory will see the SEC directly involved in the development and issuance of accounting principles. The approach advocated here appears to be the expedient alternative of choice of "best practice." It appears that the political objective of "public interest" would prevail, again without internal or external validity being established. It is ironic that the process that has led to the current position of accounting principles is being advocated by those attempting to overcome the problem.

The Cohen report produced by an AICPA-sponsored committee was more sympathetic, believing that it was

> ... unreasonable to expect an authoritative accounting body to develop rules that will always deal adequately with complex and rapidly changing business conditions, *particularly since agreement has not yet been reached on the objectives of financial reporting.*[22] (emphasis added)

This is a curious defense, since the history of the development process reveals little or no attempt to establish an objective, or if one were established, to build upon it a theory of accounting from which to develop rules.

The current U.S. system for developing accounting standards indicates many of the problems already mentioned under the U.K. system (see exhibit 7).

The pressure brought to bear by the Metcalf inquiry has led to change, with the FASB still surviving. Hopefully, the concept of a conceptual framework and the subsequent attitude change to principle development will survive criticism by practitioners that the FASB cannot expeditiously attack problems as they arise. If the old attitudes prevail, history will repeat itself.

There are, of course, other pressures to be overcome. The evidence suggests that the objective for accounting could be imposed from outside the profession. The primary example concerns the issue of oil and gas accounting. The SEC, a public sector agency, undermined the ruling of the FASB, a private sector agency, on the grounds of "public interest." The term "public interest" is, of course, difficult to define but must incorporate political and economic variables. It appears,

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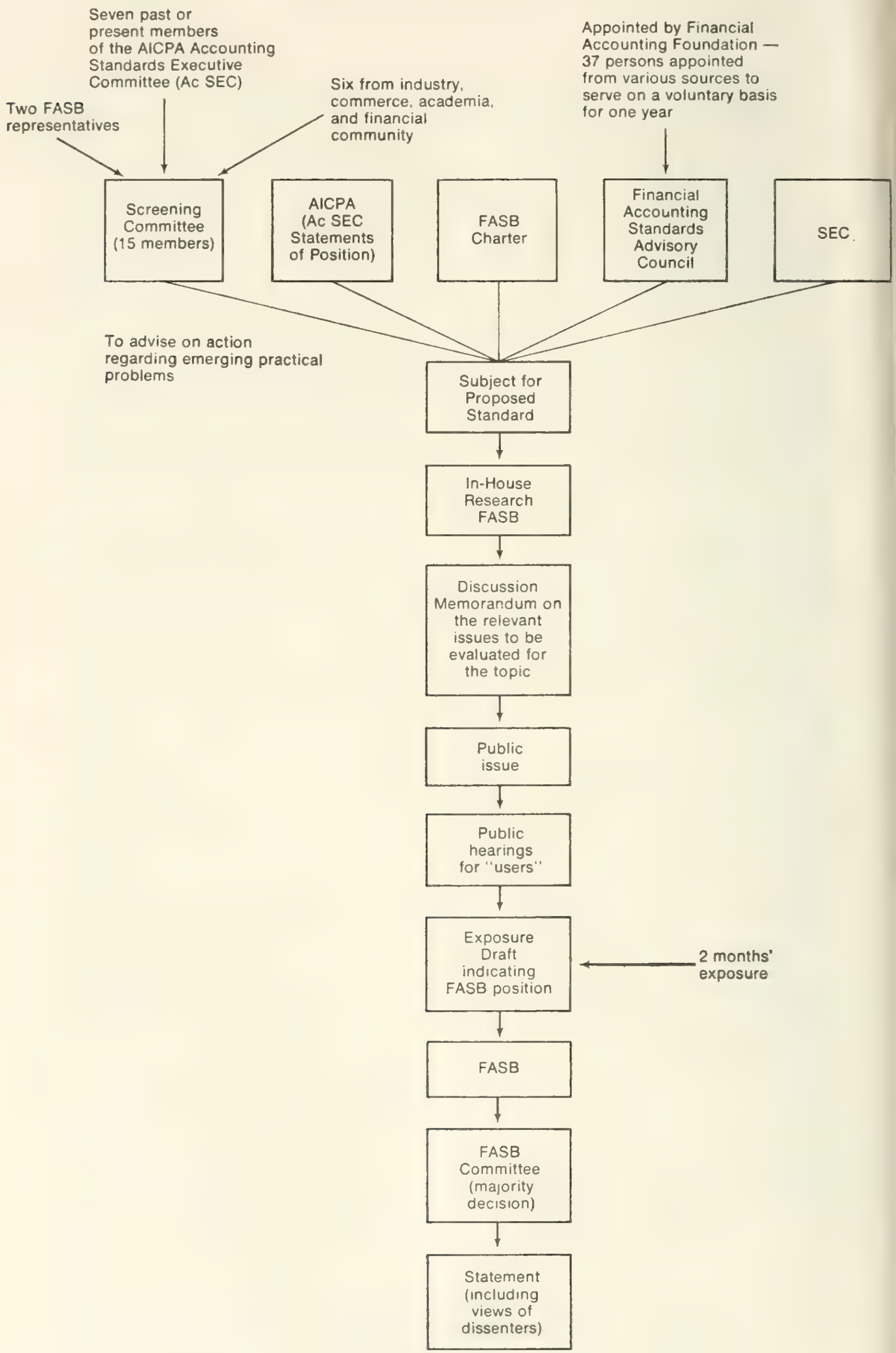
[22] Commission on Auditors' Responsibilities, *Report, Conclusions and Recommendations* (An independent Commission established by the American Institute of Certified Public Accountants) (New York: AICPA, 1978).

Exhibit 7. U.S. Accounting Standards Procedure[23]



[23] Blake, "Comparison," p. 51.

therefore, that the SEC accepts the proposition that accounting standards should be determined in the private sector, if they are in the "public interest." The "public interest" must then become part of the conceptual framework. This requires that the FASB conceptual framework approach to accounting development be sensitive to many more issues if it is to survive.

A more recent attempt by the FASB to overcome the lack of an objective in accounting saw the issuance of the Statement of Financial Accounting Concepts No. 1 (1978). This attempt to promote accounting development again appears to have had little impact. Dopuch and Sunder conclude, "Our initial guess is that the objectives selected by the Board will be ignored in future rule-making activities, just as were those from previous authoritative attempts."[24]

AUSTRALIA

To a large extent, the development of accounting principles in Australia has been heavily influenced by the United States and the United Kingdom, although as Winsen suggests, "The Australian profession has not been quick to take advantage of the lessons learned by their colleagues in other countries."[25]

In its early stages and into the 1960s, the Institute of Chartered Accountants in Australia (ICAA) relied heavily on U.K. statements. When in 1946 the ICAA first attempted to codify accounting principles, it relied heavily on U.K. precedent. Many of the recommendations during this period were copies of earlier ICAEW pronouncements except for slight alterations for differences in Companies Act legislation. The ICAA adopted the general philosophy of the ICAEW by opting for an administrative role.

The Australian Society of Accountants (ASA) did, however, adopt a different philosophy. In the late 1930s and early 1940s (when it was known as the Commonwealth Institute of Accountants), it instituted a series of annual lectures on accounting research with the cooperation of Australian universities. They also established a Committee on Accounting Principles (1938) which accepted the task of reviewing the work of other accounting organizations. The committee was superceded in 1948 by an accounting research committee. In general, the ASA

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[24] N. Dopuch and S. Sunder, "FASB's Statements on Objectives and Elements of Financial Accounting: A Review," *Accounting Review* (January 1980): 18.
[25] J. Winsen, Discussion Paper No. 3/80, "Regulation of Financial Reporting" (Department of Accounting and Finance, Monash University), p. 27.

showed a broader eclecticism than the institute which rigorously followed the ICAEW.

However, the period 1930 to 1970 saw little activity, other than a continuation of the activities described. The period did, however, see the first chair of accounting in Australia in 1955; this number increased to twelve by the end of the 1960s, comparing favorably with the nine in the United Kingdom.

It was during the early and mid-1960s that the financial crashes, similar to those in the United States and the United Kingdom, stimulated further action by the profession. The major event during this period was the establishment of the Australian Accounting Research Foundation (AARF) in May 1965. In an unprecedented action, the two major professional accounting organizations achieved a measure of cooperation. The foundation was given authority to issue statements on accounting practice, although any "official" statements remained the prerogative of the institute and society councils. The spirit of cooperation was further extended in 1972 when ASA and the institute merged their "Accounting Principles Committees" to form the Australian Accounting Standards Committee.

The AARF experienced early difficulties when the first research director, appointed in July 1969, resigned after serving four months. It was not until January 1971 that the first "permanent" director was installed. As an indication that some lessons have been learned from overseas experience, the formation of the AARF emphasized the importance of fundamental research, stressing that this research must not be overshadowed or neglected by the pursuit of short-range objectives. It was envisaged that AARF would have two basic functions: to undertake its own research studies and sponsor those of individuals, and to prepare and issue exposure drafts on accounting practice for the consideration of the profession as possible professional pronouncements.

Unfortunately, the AARF still suffers from the same problems as its overseas counterparts. Issues are researched on an ad hoc basis with no objective stated. The early work of the AARF was in fact descriptive and influenced by the work of the APB in the United States. For example, in 1972 the AARF published "Australian Financial Reporting," which comprehensively examined the accounting practices and financial disclosures of 129 Australian companies. Since then, the AARF has been extremely active in the production of exposure drafts and accounting standards. It is evident that there has been no work done of a theoretical nature so as to promote a base for the issuance of

standards. Many of the drafts issued are subject to inconsistencies and extended criticism.

Winsen[26] asserts that the future and effectiveness of the AARF may depend on whether it does learn from the fate of the APB. He suggests that the APB foundered because of the lack of significant resources and the lack of representation allowed to affected nonaccountants (users). He follows this with criticism of the effectiveness of the exposure draft procedure:

> The Australian Profession may well lose much of its existing support if the experience of some, who have attempted to provide feedback on exposure drafts, is widespread. Comments on drafting improvements are readily incorporated in subsequent drafts. Comments of substance appear to be ignored.[27]

Recent events are symptomatic of this; evidence the failure to achieve the desired state of accounting. In June 1978, the New South Wales Attorney-General stated, "... there are virtually no authoritative accounting standards upon which the Crown can rely to secure a conviction."[28]

The Attorney-General spoke of the low level of achievement of the accounting profession in "... the field of promulgating and observing basic standards in the presentation of audited accounts and financial statements."

In accordance with this concern, the Accounting Standards Review Committee was established with Professor R. J. Chambers as chairman. The committee was

> to examine the accounting standards which have been promulgated either in their final form or at the exposure stage by the accounting profession

and

> to consider any other standards coming to the attention of the Committee which should be considered in the interests of parties who use published information.[29]

The report was produced in May 1978[30] and was critical of current accounting practice. Consistent with events in the United States, the committee stated, "The Committee is of the view that appropriate standards should be given statutory or regulatory endorsement. But it

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[26] Ibid.

[27] Ibid.

[28] *Australian Financial Review* (14 June 1978), p. 28.

[29] B. Booth and L. Lyons, "Another Great Leap Forward by a Committee on Accounting," *Chartered Accountant in Australia* (June 1979): 15.

[30] Report of the Accounting Standards Review Committee, *Company Accounting Standards* (Sydney: N.S.W. Government Printer, May 1978).

does not consider that the present standards should be so endorsed. . . ."[31] In a comment on accounting standards abroad, the committee stated,

> We attribute the lack of success of both public and private exercises to the absence of a precise specification in the statutes of what the legislatures have required; and to the apparent reluctance of standard-setting committees to elucidate the general specifications of the statutes in the light of the practical needs of users of accounts.[32]

In the Australian context, the report was critical of the absence of a general framework and specification of the purposes of accounting and users of accounts.

INTERNATIONAL ACCOUNTING STANDARDS

The three countries considered in this paper are affiliated with the International Accounting Standards Committee (IASC) which was established in 1973. The aim of IASC was to promote symmetry between the accounting practices of member countries. Like the countries already discussed, the standards prescribed by the IASC are a consensus of opinions by member-country representatives and are not developed within any framework.

Winsen is critical of the IASC because of its committee approach and the influence it has on the Australian profession:

> Unfortunately, the Profession's *mode operandi* appears to have exacerbated its problem. The Australian profession often appears to decide to issue standards on a given topic because they have been introduced by the International Accounting Standards Committee (IASC). This is unfortunate because the IASC, in particular, unashamedly seeks compromise, it seems, rather than research as its prime objective.[33]

The schism debate has also found its way into discussion of the IASC. McComb points to the fact that the activity toward harmonization of accounting standards at the international level has come from practitioners rather than academics.[34] The consequence has been the adoption of existing good practice in member countries, with a strong Anglo-American influence.[35] The accounting profession internationally has learned little from the past. McComb suggests

> It is therefore at this point in the evolution of international accounting stan-

[31] Ibid., p. 12.
[32] Ibid., p. 13.
[33] Winsen, "Financial Reporting," p. 25.
[34] D. McComb, "The International Harmonization of Accounting: A Cultural Dimension," *International Journal of Accounting* (Spring 1979): 2-3.
[35] Ibid., p. 4.

dards that we may be obliged to pause and give more consideration to investigating the possibility of designing a conceptual framework within which international standards can or should be developed.[36]

CONCLUSION

The evidence presented suggests that in the United Kingdom, the United States, and Australia, the development of accounting principles has many common features. Historically the development process has continued without due regard for a theoretical foundation and has been oblivious to the needs of the users of financial information. Accounting principles have been developed as a consensus within sections of the profession, and often in response to intense criticism and threats of legislative intervention. The predominant response to such pressure has traditionally been ad hoc reconstructions to committee procedures rather than taking a more fundamental approach based on an objective of financial reporting. There is no evidence that any standard-setting organization has proceeeded from a foundation of the functions of accountants.

History tells the accounting profession that the ad hoc pragmatic approach has not been successful in achieving real progress. The success has only been in maintaining an insecure autonomy in the setting of accounting standards. Supporters of the current system can argue all the faults and problems of theoretically based approach, but history proves its neglect, and the resultant predominance of the pragmatic attitude has not worked.

It is incongruous that the very recent trend for accounting organizations to adopt a more basic and theoretical approach is being criticized by members as "too academic." It has been suggested (unofficially) by some large corporations that they establish a separate accounting lobby group to restrain the professional accounting organization from their "academic" pursuits. In Australia, it is these very people who have created so much controversy over the introduction of inflation accounting, preferring the conventional historical cost approach. It is unfortunate that their historical bias has not convinced them that the evidence of the past clearly indicates a change. "Only by intensive research and the resultant construction of a conceptual framework will it be possible to develop a structure which will be anything more than a rehash of what has been done in the past."[37]

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[36] Ibid.

[37] Stamp and Marley, *Accounting Principles,* 103-4.

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Accounting as an Artifact: A Methodological Design on Dimensions of Accounting

DANIEL BOUSSARD*

...il existe une tendance à oublier que l'ensemble de la science est lié à la culture humaine en général, et que les découvertes scientifiques (...) sont dénuées de signification en dehors de leur contexte culturel.[1]

Le physicien ne découvre pas une vérité donnée que taisait le système, il doit choisir un langage, c'est à dire un ensemble de concepts macroscopiques en termes desquels il sera demandé au système de répondre.[2]

ACCOUNTING AS A SOCIAL PHENOMENON

Academic accountants have developed a growing interest in the study of the determination of accounting standards correlated with a strong emphasis on the social "nature" of accounting. New demands arise for social analysis of the evolution of accounting instead of technical studies, for analysis of the role of accounting in its organizational and societal context, and for new views concerning the ongoing debates on inflation accounting and societal accounting.

For instance, the Jonsson-Lundmark study investigates inflation accounting in Sweden as a political process.[3] Hopwood remarks on the

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[1] E. Schrödinger, *British Journal for the Philosophy of Sciences,* vol. 3 (1952): 109-10.

[2] Ilya Prigogine and Isabelle Stengers, *La Nouvelle Alliance: Metamorphose de la Science* (Paris: Gallimard, 1980), pp. 23 and 232.

[3] Birgitta Jonsson-Lundmark, "The Acceptability of Inflation Accounting in Sweden" (Paper presented at the Congress of the European Accounting Association, Cologne, March 1979).

same topic, "... although the impetus for change was economic, we are well aware of how the ensuing debate on the topic has been influenced by the changing nature of today's institutional and social environment."[4] Concerning the influence of cultural factors on societal accounting, Klaassen and Schreuder underline that

> The emergence of the social accounting topic is commonly not attributed restrictively or even primarily to economic factors, but to wider social changes. ... The totally different orientations of American and French social reports, for instance, can seemingly only be explained by the hypothesis that the underlying rationale differs widely.[5]

These brief quotes from advocates of the social view of accounting will suffice here. They are starting points for questioning the fashionable categories generally used to comment on this social aspect of accounting and to partition accounting studies: normative/positive,[6] hard/soft, descriptive/prescriptive, and so on, as shown in exhibit 1.[7]

One notices that, in this matrix, the criteria have been used with some care. The normative/positive distinction is avoided. It is afterwards clearly stated in the text that accounting is studied as a hard system, a system in which all variables can be known and valued, to show the process by which accounting represents the business entity, how accounting hardens a soft system: the enterprise and its environment. Finally, the typology based on the point of view is presented in cautious words: an author can be "more" an observer, or "more" an intentional agent of change. But is it really possible to ignore the movement which historically established the conventional accounting model and is still at work on new issues? Can one prevent a mere information system from playing a role in its organizational and cultural setting once it is established or institutionalized? Can a model be studied without thinking of the designer's intentions? May descriptions have some features of prescriptive assertions? Does the recognition of the social "nature" of accounting mean the recognition of its normative content?

The purpose of this paper is to answer these questions by drawing

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[4] Anthony Hopwood, *Social Accounting: The Way Ahead?* (London: Chartered Institute of Public Finance and Accounting, 1978).

[5] Jan Klassen and Hein Schreuder, "Accounting Research, the Unhappy Marriage of Rule Making and Tool Making" (Paper presented at the Second Congress of the European Accounting Association, Cologne, 1979).

[6] The pair normative/positive refers to the extent to which values play a role in the theory. See the Klassen and Schreuder work cited in footnote 5. In that study, normative (value laden) and positive (ethically neutral) are regarded as *ideal types*.

[7] Daniel Boussard, "Application of GST to the Financial Accounting Model," *International Journal of Accounting* (Fall 1978): 17-37.

Exhibit 1. A Matrix of Accounting Studies

		SCOPE OF THE VARIABLES	
		"Hard" studies emphasizing the internal structure variables	*"Soft" studies* emphasizing economical, sociological, cultural, or ideological variables
POINT OF VIEW OF THE WRITER	The writer is more an *observer* studying models	1 Insights into the structures and internal goals of accounting models	2 History, sociology, and anthropology of accounting
	The writer is more an *agent of change* designing models	3 Design of operational accounting systems within information systems	4 Policy making and normative studies in accounting

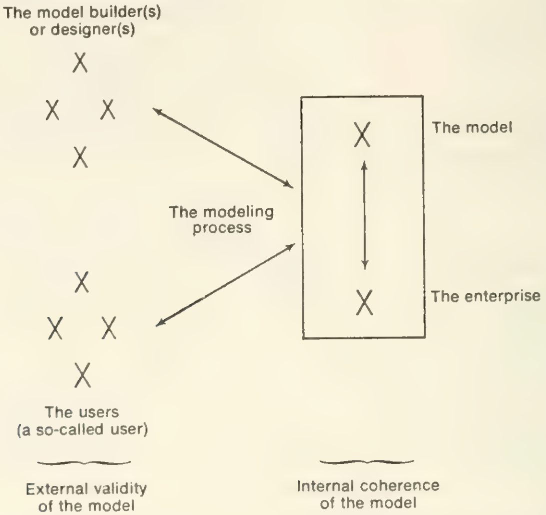
a methodological diagram for approaches of the soft side of accounting and of accounting research as well. It is also an attempt to relate the internal coherence of the model to its external social validity because, as Klaassen and Schreuder note, "the basic point of departure for any examination or construction of accounting research methodology would therefore necessarily be a clear positioning of the accounting function in (its) wider social framework."[8] Following this advice, the relationships between the different elements of the elaboration of accounting are shown in exhibit 2.

There are obviously some constraints to such a task, and the following are explicitly accepted:

1. A general approach — Accounting is certainly not the only social structure, so what is said could be applied to other artifacts. This is only the building of a general design that could have other applications.
2. A static approach — It is indeed when changes occur that structures reveal their organization, but it would be too much to offer in addition to a model of evolution here.
3. An amateur approach — Is it the accountant's task to make such a

[8] Klassen and Schreuder, "Accounting Research," p. 4.

Exhibit 2. Elements of Accounting Elaboration



framework, acting then as a sort of social scientist? The answer is simple: as long as social scientists are not interested in accounting, the thinking done on this matter will be the task of accountants. Perhaps they prefer to be observers rather than observees.

4. An "iconic" approach — If Rutherford wrote "qualitative is nothing but poor quantitative," one could also think that quantitative is poor qualitative. Condemned to being poor, we suggest a compromise — using "iconic" representations: graphs, schematics, and such.

5. An uncertain approach — Calling for innovation, Burchell et al. state:

> For the foreseeable future at least, the different perspectives which are conceivable and available would produce very different insights, problems and leads. Initially, such developments cannot help but produce enormous uncertainties for accounting inquiry.[9]

But they add:

> We nevertheless believe that such changes in orientation are required if scholarly inquiry is to explicate theories of accounting which can help us to

[9] Stuard Burchell et al., "The Roles of Accounting in Organizations and Society" (Working paper, University of California–Los Angeles, and Workshop on Accounting in a Social Environment, the European Institute for Advanced Studies in Management, Stockholm, October 1979), p. 32.

appreciate the social and organizational *significances* which it has had and is capable of having. (emphasis added)[10]

The position of this paper[11] is that there is no "nature" of accounting but only relationships which give it its significance. What are the relationships, and between which elements? This is an attempt to build a design under the specified constraints (see the next section), directed toward two types of applications: accounting (page 133) and accounting research (page 139). The conclusion discusses the dichotomy involved in the fashionable above-mentioned distinctions: normative/ positive, and so on.

GENERAL ELEMENTS FOR A DESIGN

If accounting is a "reflection of wider social concerns," it is also a shaper of its environment. As a noun, a *model* is a representation of something. As a verb, *to model* means *to shape*. There must be two areas linked together by a systemic relationship: a description of accounting and a description of the environment out of which it springs and which is influenced by its concepts and outputs. Accounting is seen as an artifact, both a reflector and shaper of human action.

The world of artifacts clearly includes not only material structures but also conceptual pieces, something similar to elements of Popper's World 3:

> Popper makes use of the notion . . . of a third world, a world of objective structures which are the products, not necessarily intentional, of minds and living creatures, but which, once produced, exists independently of them. . . . World 3 is the world of ideas, art, science, language, ethics, institutions — the whole cultural heritage in short — insofar as this is encoded and preserved. . . .[12]

For instance, we examine, evaluate, criticize, and so on, accounting as having an objective existence, either in the form of accounts and statements or of rules and general principles.

In the reflection/shaping process existing between action and the field of artifacts, the evolution of the subject also takes its roots. However, this topic is not considered here.

After having set the fields in mutual relationship, a typology or framework remains to be found in each area. Descriptions of human action and of artifacts which are proposed are in mutual correspondence

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[10] Ibid.

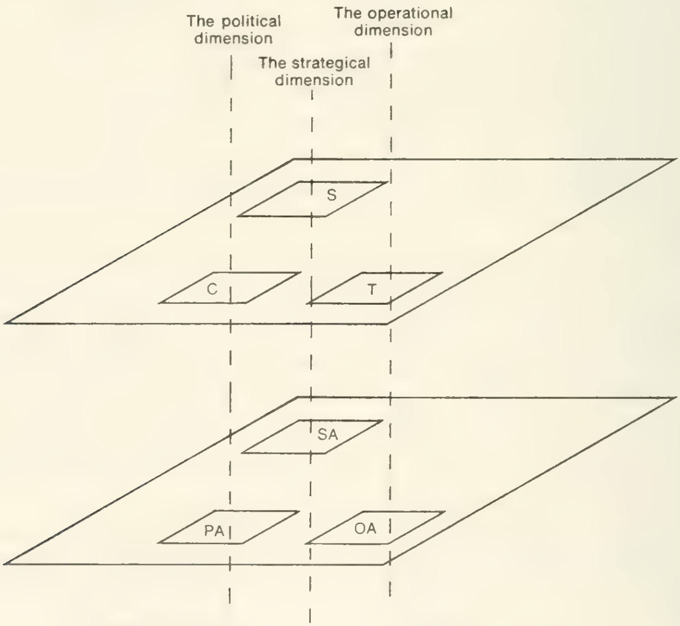
[11] A paper (as a model, or another artifact) has no objectives (purposes), but it conveys those that the builder(s) has (have) given to it.

[12] Bryan Magee, *Popper* (Glasgow: Fontana-Collins, 1973), pp. 60-61.

insofar as dimensions of actions characterize dimensions of accounting which inherits these points and conveys them (see exhibit 3).

As is common in the science and practice of management, which copes with the problem of action, three dimensions are isolated: the political, strategic, and operational.[13] This typology does not pretend to unravel all of the building process of accounting but just to allow one to ask some questions. For instance, as for any model, the designer exists, he (or she) has certain purposes expressed in the choices made at each step of the process or in each part of the model. But, in the case of institutionalized models, as is the case for accounting, who (what) is the model builder? How are his (her or its) choices expressed? How do social values become integrated within the technical aspects?

Exhibit 3. Dimensions of Action and Types of Artifacts



PA : Political action

SA : Strategical action

OA : Operational action

C : Culture

S : Structures

T : Things (or productions)

[13] See, for instance, Pierre Tabatoni and Pierre Jarniou, *Les Systèmes de Gestion, Politiques et Structures* (Paris: Presses Universitaires de France, 1975).

The political dimension exists in all social behavior (in family life as well as in professional life). This is the subset of action oriented to legitimate action in general (that is, operational action). It can be concomitant to it, precede it in accordance with the theoretical system of planning, or follow it in a rationalization process. Similar views are expressed, referring to the seeking of a consensus or the management of conflicts. This dimension originates in the cultural system, transforming the idea of good into social norms and ends through a more or less homogeneous set of values, therefore justifying the results of action. Action is Manichean; it requires a knowledge of the good and the bad. As they are key words in this study, brief comments on *values, ends,* and *norms* are given.

Values build the general conceptions of society, the set of main features of a culture, the products of social action in history, embodied in all representations in society. A clear distinction must be made with the widely used concept of individual or subjective values.

> Individual values are commonly said to become manifest in the form of preferences. Social values, on the other hand, are seen as referring to larger scale, perhaps more stable and more formal, commitments of a whole culture from which individual values can be abstracted.[14]

Social values are embedded in norms and ends. They are at the origin of value judgments which define what is legitimate.

Ends represent general intended results of action, general objectives which embody the idea of good. Social values such as truth, material progress, justice, respect of nature, work, and so forth, are also very general ends.

Norms create models of behavior, general criteria of action. For instance, objectivity, productivity, legality, ecological balance, and the forty-eight-hour week are norms which are linked to the preceding values.

Norms and ends are rooted in values out of which two aspects of development in mutual correspondence are constituted: (1) the development of values in a finalization process — what people wish to do, and (2) the development of values in an organization process — the rules people follow. These two lines are connected because norms express a certain level of acceptance or of realization of ends. The norms/ends relationship shows the social rationality formalized in the strategic activity.

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[14] Hasan Ozbekhan, "Towards a General Theory of Planification," in *Perspectives of Planning* by Erich Jantsch (Paris: OECD, 1971), p. 81.

If the political activities play on the effective side of human personality, strategies refer to its cognitive side and organize the coherence of action. They develop well-defined principles of rationality, such as economic rationality, to relate objectives and means.

The strategic dimension explicitly considers the use of resources and determines more precise aspects of ends and norms: practical objectives for the use of resources[15] and precise work procedures. Whether the rationality it establishes is "real" or a mere excuse for action — a rationalization — is another question. It is simply a fact that in our societies, the power of truth relies on coherence, on formalized rationalities. "Action needs, in other words, to have an explicit and public rationale . . . a formal expression of the aims and intentions that might be regarded as being embodied within them."[16] It is clear that accounting is a way to rationalize business activity and that academic literature provides logical justifications for the roles of accounting.

The operational dimension transforms resources into outputs or "things." It is the concrete performance of specific action in the frame defined by strategies and policies. Objectives, rules, ends, norms, and the more distant cultural "milieu" build a span of control of operational action.

Elements in direct correspondence with the three dimensions — artifacts, conceptual or physical — are nothing but the projection of the world of action in an objective world which has an existence of its own.[17] As previously mentioned, they include values, rules, institutions, languages, laws, arts, and so forth. All these elements can be grouped into three categories: culture, structures, and things.

Culture is the set of more or less homogeneous general conceptions (values, ends, norms) in all areas of society which determine and justify people's behavior in the group to which they belong. These general conceptions are rooted in the history of the groups and in particular in the political processes.

Structures are social or physical devices such as accounting, toys, or houses which express general cultural conceptions and reproduce themselves by determining behaviors, in particular in the activity of produc-

[15] A reminiscence of Vagn Madsen and Thomas Polesie, "Resources, Objectives for the Use of Resources, and Overall Goals: A Budgeting Conundrum for Thought and Action" (Paper presented at Second Congress of the European Accounting Association, Cologne, 1979).

[16] Burchell et al., "Accounting in Organizations and Society," p. 8.

[17] We are aware of the problem of services implying a large definition of things; that is, the problem of remanence of human productions more or less embedded in physical evidence.

tion. This word is employed here as a given reality, such as a chart of accounts or defined procedures, as well as a theoretical construction as, say, in a structure of accounting theory.

Things are products of operational action. They appear in this design as mirrors and transmitters of the two other dimensions. The design also provides a span of control from mere checking to the significance of things.

The cases of accounting and accounting research illustrate this typology and the relationships it induces.

APPLICATION TO ACCOUNTING

The systemic relationship raises two vast questions indeed: the "reflection" aspect of accounting (How has the model been built?) and the "shaping" aspect (What role does it play in its environment?). This is why this note has only a methodological emphasis.

The Building of the Model (The Reflection Aspect)[18]

According to the cultural environment, the political accountant determines large features of the model, aiming at a social acceptance of the rules. The answer to the how, the organization process, is based on accounting norms: the generally accepted principles. Whether they generate practical rules or justify them later on in a theoretical way does not really matter here. The finalization process is based on the more general objective of "good" representation — the true and fair view. A second step in the network of ends and objectives can be seen in the Accounting Principles Board's Statement No. 4 criteria: relevance, verifiability, neutrality, comparability, and so on. Views of accounting, such as accountability or decision making, are also such large goals that they may be understood differently and therefore gain general agreement.

However, the question remains as to who (what) the political accountant is. The establishment of the large features of accounting which determine practical rules refers to historical cultural processes involving values, perceived constraints, particular interests, and such, in a social setting which rather inhibits analysis. The following general quote could be applied to accounting as well:

> The moral order and the knowledge which sustains it are created by social conventions. If their man-made origins were not hidden, they would be stripped of much of their authority. Therefore the conventions are not merely tacit but often extremely inaccessible to investigation.[19]

[18] See exhibit 4.

[19] Mary Douglas, ed., *Rules and Meanings* (Harmondsworth: Penguin Books, 1973), p. 14.

Would the disentangling of the political process really imply the end of the validity of accounting rules? Are studies of policy making realistic? Are studies "of" accounting and not "in" accounting challenges to the status quo?[20] To those who would rather not have these processes questioned, it seems easy to say that continuous examination (which is in general noncritical in the current sense) is a mechanism equivalent to the one of experimentation in physical sciences, that it is the price to be paid so as not to be dogmatic, that nonutilitarian or "epistemological" approaches[21] can help the accountant to think his/her matter.

The elaboration of accounting rules not only involves accountants and auditors, professional institutes, state agencies, and the academic work, but it is also a reflection of other social conventions and ends. The Burchell et al. paper underlines the idea that elements are intricate and that changes have emerged at a distance from practice. In particular, it insists on the effects of the roles given to accounting:

> Accounting has been challenged and changed in the name of the roles which it is seen as serving. People have sought to extend accounting in order to promote "corporate accountability" and to further "rational decision making." Others have pointed out the challenges of social change. . . . Moreover, the public roles of accounting are often reflective of other bodies of thought and practice with which accounting . . . has become intertwined. And in this respect, the influences of conventional economic discourse and adminstrative theory are particularly important.[22]

In terms of the design, there is, therefore, a continuous interaction between the artifact and the action which, in particular, makes the accounting artifact convey a normative content, a social idea of "good" accounting which cannot be clearly uprooted with the means we have.

But if, almost by definition, it is difficult to describe this latter dimension, it is easier to do so for the strategic one. Our frame of mind requires "clear" constructions to determine and/or justify action.

The strategic accountant works at the state level as well as at the enterprise level to produce (1) rules or regulations, accounting charts, evaluation rules, administrative procedures, and so on, (2) particular objectives for accounting, for instance based on "users' needs," or so-called needs, and (3) a coherence between rules and objectives — that

[20] Anthony Hopwood, "Accounting Research and the World of Action," *Accounting Organizations and Society,* vol. 3, no. 2 (1978): 93-95.

[21] Bernard Colasse, "A Note on an Epistemological Approach to Accounting" (Paper presented at Fourth Workshop on Accounting in a Social Environment, the European Institute for Advanced Studies in Management, Grenoble, 1979, and at the Seminar of the Association Francaise de Comptabilité, Cergy-Pontoise, 1980).

[22] Burchell et al., "Accounting in Organizations and Society," p. 10.

is, a rationality. It is the role of the professional bodies, state agencies, and business management to give this internal coherence.

The operational accountant applies rules and objectives to the recording of transactions or other accounting facts, and to the producing of financial statements or other data. The accounting output therefore appears as a reflection of wider social concerns via rules and objectives linked to the cultural field. Accounting rules give true and fair views of business entities through GAAP just as laws are justice through legality. However, it must be observed that rules do not entirely determine the operational accountant. Degrees of freedom exist for practitioners.

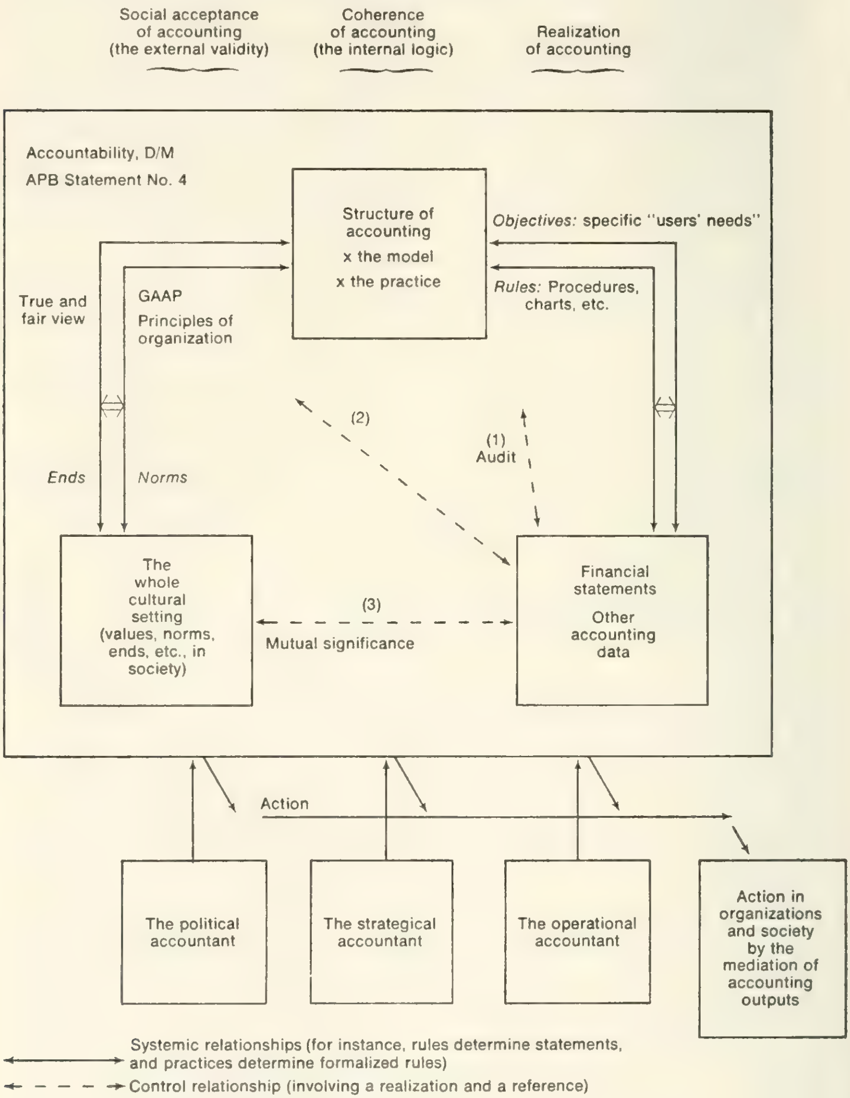
The control of accounting outputs is a well-known practice: the auditing of statements and other data. Control (1) in exhibit 4, the conformity to rules, is always done. Conformity to GAAP must be performed in some cases. The control of accounting objectives merely results from a general discussion among scholars and practitioners. Reference (3) — mutual significance — in the design appears as the implicit cultural control of the accounting "things." The significance of accounting arises from its cultural origins, and cultural changes determine output changes through the dimensions described.

THE ROLES OF THE MODEL (THE SHAPING ASPECT)

The "positioning" of accounting, its methods and output, in the enterprise and in society, has been considered in various ways. The design can be used to examine political, strategic, and operational views of accounting. However, accounting appears primarily as a body of rules, a structure, a strategic tool, a cognitive device that acts in the management of the business entity (see exhibit 5), and in society as well, by providing certain types of information and means of economic calculations.

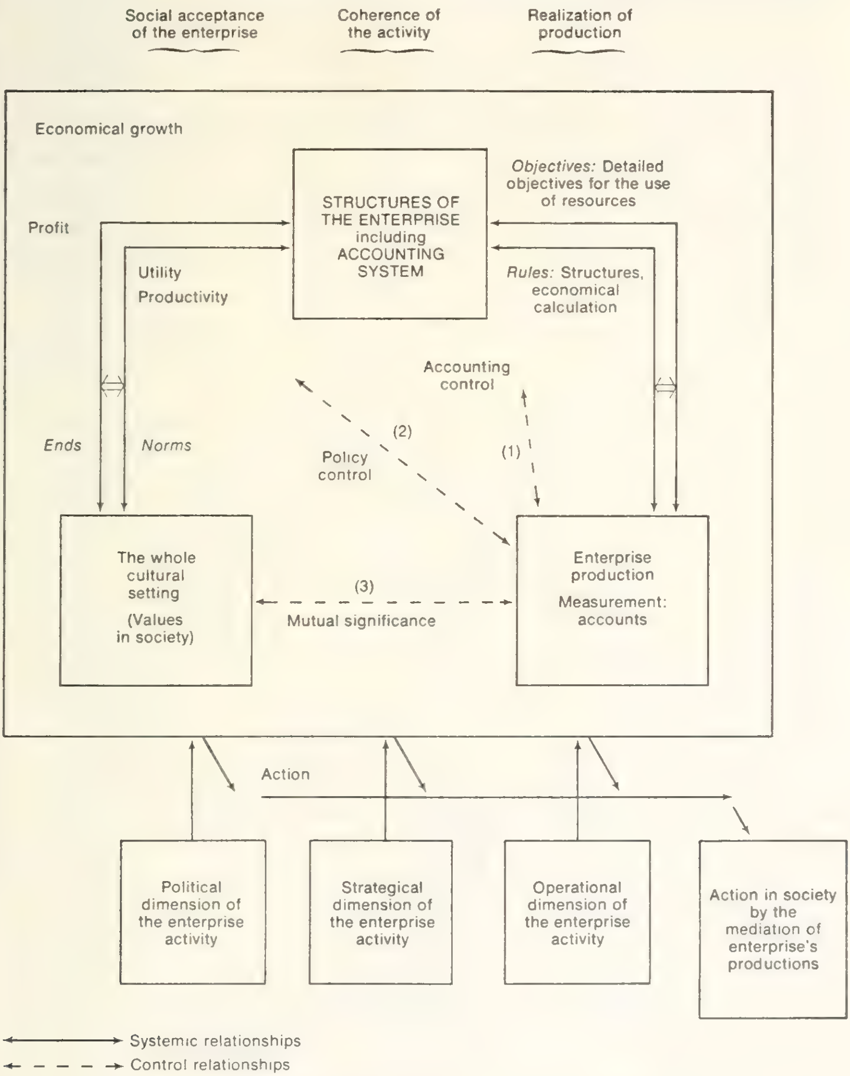
With this perspective applied at the enterprise level, accounting appears as a bridge, an articulation between business ends and precise objectives for the use of resources, between business norms and formalized procedures of decision making, between the two sides of the feasibility of business action: the acceptance in society and the physical constraints due to the use of resources. At the societal level, accounting can play the same role in decision-making procedures, especially in countries where the stock market is important, or in countries where many economic decisions are taken at the state level. In the textbook approach, the use of the model and the information it gives determine the decision. In other analyses, studies of coherence are viewed as legitimization processes, as complementary means used to justify action.

Exhibit 4. Dimensions of Accounting



Moreover, uses of accounting are not only of a strategic type (ex ante or ex post). As a reflection of a cultural environment, accounting concepts echo these cultural patterns in organizations and society. As

Exhibit 5. The Enterprise Dimensions



an administrative means providing statistics, accounts, and so on, it plays an operational role at the enterprise as well as at the state level. Therefore, what accounting "is" seems to be subject to very different views. There are two ways of illustrating these aspects: the authors'

judgments and peoples' perceptions. A very brief reference is made to this first aspect, the accounting literature (see exhibit 6).

On the one hand, accounting obviously has an important administrative or logistic function. Let us note that Yamey's view is mainly a reaction against some glorification of the matter.[23]

On the other hand, ideological views emphasize the normative content of accounting (or its social control function). Marxist and anthropological approaches underline the shaping function as part of a political action.[24] According to Marxists, accounting protects and legitimizes the owners' rights. The approach of Gambling shows how data can be used as a magical device to justify actions or decisions, or such.[25] Accountability also supports the acceptance of the enterprise as an

Exhibit 6. The Uses of Accounting

	Enterprise level (Internal uses of accounting)	*Society level* (External uses of accounting)
Operational uses of accounting (Accounting as a practical means of realization of action)	1 Administrative or logistical function (Yamey's view)	4 Administrative role in society x Statistics x Taxes x Contracts, etc.
Strategic uses of accounting (Accounting as a means of finalization organization and control of action)	2 Internal decision-making tool Objectives for the use of resources in accounting terms Performance measurement	5 External decision making x Investors x Creditors, etc. State planning
Political uses of accounting (Accounting as a means of supporting acceptance of action)	3 Accountability (Enterprise level) Magic use of accounting data (Gambling's view)	6 Accountability (Societal level) Links society-accounting x Sombart's view x Marxists' view x Linguistic studies

[23] Basil Yamey, "Accounting and the Rise of Capitalism: Further Notes on a Theme by Sombart," *Journal of Accounting Research* (Autumn 1964).

[24] Colasse, "Epistemological Approach," pp. 12-14.

[25] Trevor Gambling, "Magic, Accounting and Morale," *Accounting Organizations and Society,* vol. 2, no. 2 (1977): 141-51.

institution. Some authors applied linguistics to analyze the shaping function of accounting.[26] At the enterprise level, controversial ideas emerge:

> Organizational research is also starting to question those automatic presumptions of a positive and causal relationship between accounting systems and effective organizational performance which implicitly or explicitly grace accounting texts and the pronouncements of practitioners and consultants.[27]

If accounting systems do not help performances, why are they set? Finally, accounting allows controls from the input/output analysis to be more "teleological" points of view.[28]

Large, complex, ambiguous — the role of accounting is therefore badly known. The design merely emphasizes an integration of the three dimensions which define a typology of accounting roles.

APPLICATION TO ACCOUNTING RESEARCH

Accounting research is not exactly an institution, although different types of institutions influence it, and schools of thought do exist. However, a general illustration based on the design is possible, for papers are artifacts. Moreover, the design can generate a discussion of metatheories of research.

The Reflective Aspect of Accounting Research

Each researcher encounters the problems of acceptance, coherence, and realization.

The political part of the researcher must deal with the whys and the hows of the work in a cultural environment. The research is partly determined by ends and norms generally admitted among colleagues of the same school. This normative content of accounting research is now being questioned, together with the status of the researcher.

> The pragmatic process of problem definition and solution in the accounting area is itself a significant challenge to the research community, for without this, the researcher is in danger of serving as a rather detached, but hopefully high-level, technician rather than as a person with an explicit understanding of the accounting process that goes substantially beyond what is currently implicit in practice.[29]

However, according to the particularities of the field — role of per-

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[26] For a bibliography, see Ahmed Belkaoui, "Linguistic Relativity in Accounting," *Accounting Organizations and Society*, vol. 3, no. 2 (1978): 97-104.
[27] Burchell et al., "Accounting in Organizations and Society," p. 14.
[28] Simon Archer, "The Nature and Purpose of Management Control" (Working paper, University of Lancashire, 1979).
[29] Hopwood, "Accounting Research," p. 94.

sonal factors, lesser integration of some researchers in current values, and so on — it seems that there are potentially more degrees of freedom for innovation. It remains that real change is normative change. The weight of research structures also remains.

The strategic part of the researcher must relate precise objectives and possible findings to the general ends which make "good," relevant contributions. A conformity to the norms of science is required. One must be as coherent and consistent as possible in order to apply a rationale, for instance the classical logic.[30] Mitroff and Kilmann present an alternative in the dialectic logic and defend it in these words: "The conflict between A and $\sim$A signals that there are at least two interpretations of the 'same' event, and it is vital not to ignore this contradiction, for to do so would be to ignore an important social signal."[31]

The operational researcher works and produces relatively nice things called papers which are therefore significant in their macro- or microcultural environment. Questions, methods, results, or conclusions convey pieces of norms, ends, and rationality. Accounting research is "social" as well.

The emphasis on the political side of the formation of accounting theory questions either the why or the how of the process. Two works — one on each topic — are briefly discussed.

Watts and Zimmerman embody the documentation provided in a global interpretation of the why of the creation of accounting theories.[32] Theories result from a "market for excuses," or so they say. Either the demand-supply framework is used as a pure metaphor, or it is offered as a scientific instrument. The latter requires further explanation. It seems that once the political dimension of accounting research is admitted, it must also be admitted that the supply-demand framework is not an explanatory instrument. To take an idea, to say that there is no general agreement among accounting scholars because there is diversity of interests among the concerned parties, or that giraffes have long necks because some leaves are very high, is not really false, but not a sufficient explanation in our "contingent" context of knowledge: Darwin's theory of evolution, for instance. Only a theory of social evolution can

[30] The strict logic is based on the law of contradiction — no proposition can be both true and false at the same time — and on the law of the excluded middle — every proposition is either true or false.

[31] Ian Mitroff and Ralph Kilmann, "Methodological Approaches to Social Sciences (London: Jossey-Bass, 1978), p. 74.

[32] Ross Watts and Jerold Zimmerman, "The Demand for and Supply of Accounting Theories: The Market for Excuses," *Accounting Review* (April 1979): 273-302.

explain the process of formation of accounting theories as well as of accounting rules. Nevertheless, theories can be used as excuses in the political process — that is not a market. Moreover, the questioning of the framework is not a questioning of the historical content of the Watts and Zimmerman study.

The how of accounting theory production and the place of values in scientific inquiry have been studied in Klaassen and Schreuder.[33] The authors' thesis invites us to separate, as far as possible, "rule making" — the political area — and "tool making" — the theory-building area — in order to identify better the values of the researchers and improve the coherence and scientific validity of the work. However, they present qualifications: "Kuhn (1970) has made us well aware we cannot hope to ban all values in our 'paradigm' or 'disciplinary matrix,' or even hope to make them explicit";[34] but they give incentives to be positivist: "We can however hope to achieve enough separation between facts and values to gain a common ground for argument."[35] The proposed design tends to show how norms pertaining to the political area and rules pertaining to the strategic one are alongside a continuum rooted in values. Thus, it leads to question the feasibility of a batch processing of researchers' values and of social facts. But to question the feasibility of a "positivist" attitude in accounting research is a difficult objective. Perhaps the following discussion will help.

The Shaping Aspect of Accounting Research

Social implications or roles of accounting research can also be analyzed by using the three dimensions.

Aimed toward social acceptance, theories have some political features. They play on peoples' affectivity to gain favorable opinion. For instance, Watts and Zimmerman emphasize that theoretical propositions (1) are based on objectives appealing to voters — public interest, and so on, and (2) are used in political processes. Another point of view could refer to some "magical" uses of accounting theories to justify academic institutions, to give some grandeur to the accounting subject, and so forth.

What accounting research "is" remains as big a problem as what accounting "is." As accounting, it encounters the problem of description and of its value contents. To examine these points, let us take, for instance, the Mitroff and Kilmann typology of social scientists:

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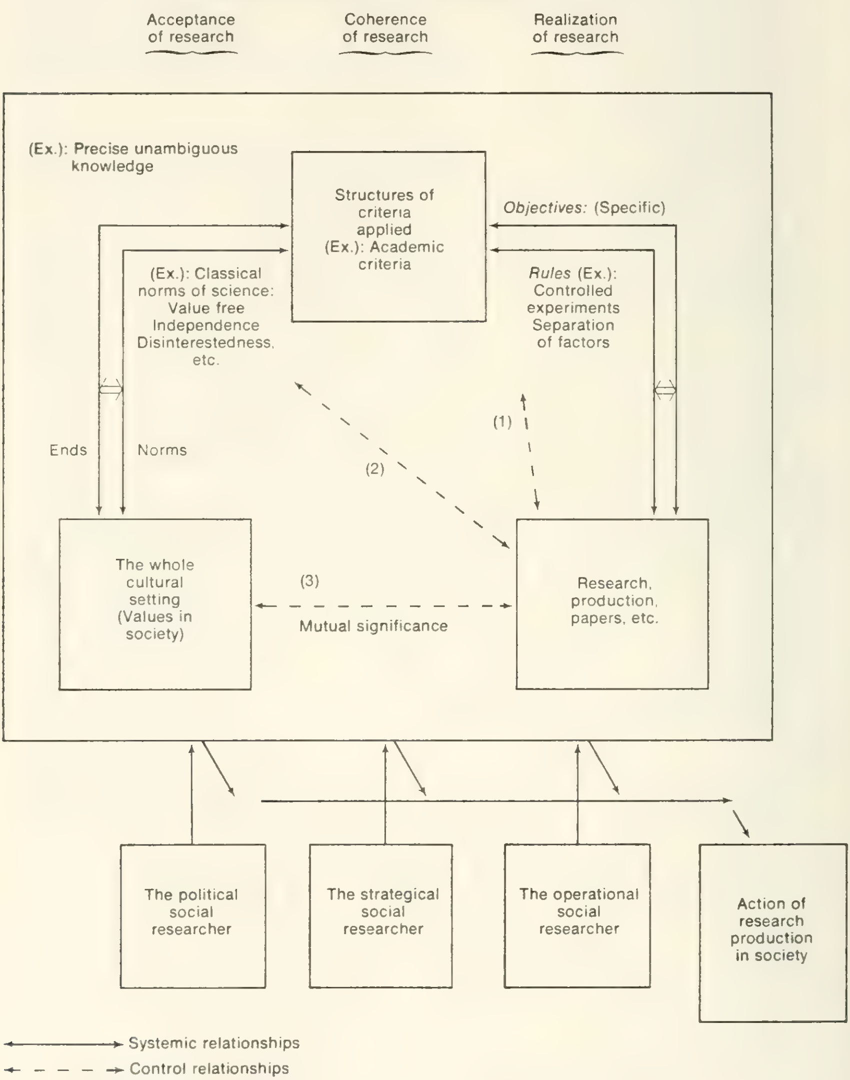
[33] Klassen and Schreuder, "Accounting Research."
[34] Ibid., p. 21.
[35] Ibid.

Exhibit 7. Dimensions of Social Research



1. For the "analytic scientist," science occupies a privileged position — value free, apolitical, progressive, disinterested, clearly separable from other fields, and so on (norms, objectives, and rules pertaining to such an analysis are shown in exhibit 7);

2. The "conceptual theorist" considers that science is not clearly separable from other fields although value free and apolitical;
3. For the "conceptual humanist," science is not value free; it is political; and
4. For the "particular humanist," it does not occupy a privileged and special position: it may be subordinate to literature, music and other ways of knowing.

There is no doubt that such different attitudes, such different orientations of mind molds society, or the readers' points of view on society, in different ways.[36]

The transmitters of these differences in ends, norms, and rationality are structures of the theories, although cognitive tools aimed at improving predictions, descriptions and prescriptions, theories, and, in particular, accounting theories remain contingency structures because of their political origin.

Theories also have operational functions when applied to technical points of the production of rules. Much of the literature pretends to play a direct role in the building of accounting. This case is clear. But do purely descriptive approaches remain without effect in practice? The bulk of research cannot fail to show certain faces of the enterprise, to create roles for accounting, and by doing so, to mold "reality" directly or indirectly. In discussing the roles attributed to accounting, Burchell et al., find that they "may tell us a great deal about how people have come to see accounting . . . and the bases from which people have sought publicly to influence accounting."[37]

SUMMARY AND DISCUSSION OF A DICHOTOMY

If accounting and accounting research are social phenomena, an analysis of what is meant and implied remains to be made. This methodological approach is an attempt to explore the external side of these matters by considering them as artifacts established by and acting in their wider context: the world of action. This systemic relationship is described with the use of three more or less concomitant dimensions: political, strategic, and operational, linked together in the why (the objectives) and the how (the rules) of action.

The political dimension, oriented toward the acceptance of action, molds norms and ends. The strategic dimension, oriented toward coherence, defines precise objectives and rules. The operational dimension,

[36] Mitroff and Kilmann, "Methodological Approaches."
[37] Burchell et al., "Accounting Organizations and Society," p. 11.

oriented toward the realization of action under the constraint of the other dimensions, produces "things," for instance accounting statements and papers which are conveyors of the value system from which they originate (see exhibit 8).

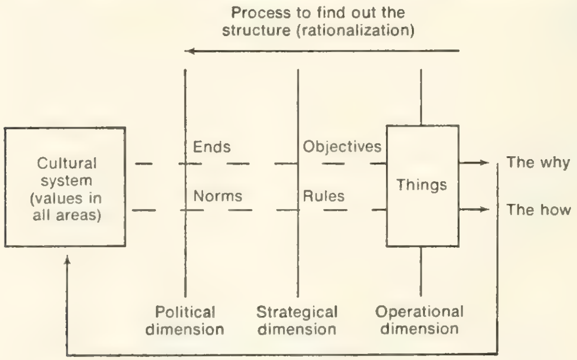
Value systems are constraints for the artifacts building in the same way as genetic codes are constraints for the development of living entities. The comment on the continuum of objectives and norms — and their link in a rationality system — leads to a short discussion of a dichotomy between values and (arti) facts.

One view considers the operational side of action as the economic calculations do. Thus, accounting is a procedure for the ordering and control of a mass of events. It is basically administrative and tactical and gives an impression of neutrality. However, the political aspects are not forgotten. They are simply supposed to be facts or events belonging to another planet, not a matter of science — economic science or accounting science. A clear distinction separates hard operations (calculations, logical applications of criteria of choice, and so on), and soft questions left to the appreciation of citizens, managers, and politicians:

> Basic questions concerning right and wrong goals to be pursued cannot be settled by science as such. . . . The citizenry must ultimately decide such issues. What the expert can do is to point out the feasible alternatives and the true costs that may be involved in the different decisions.[38]

Scientists and accountants must therefore eliminate emotions and in-

Exhibit 8. Summary of the Design



[38] Ozbekhan, "General Theory," p. 73, quoting Paul A. Samuelson.

vestigate their field in "total innocence . . . for only the innocent will facts speak. . . ."[39]

This view is justified on the grounds that value propositions cannot be verified, that they are of an affective, not cognitive, nature. Therefore, they are exiled from models and are supposed to be only individual attributes, capable of being checked only by the person whose experience is referred to. In this perspective, metatheories of accounting can be developed with subjective fields of individual values, the objective fields of events, or facts and errors due to accounting measurements. For instance, Le Lous discusses the "fundamental gap between an objective empirical structure which an accountant *measures* and a subjective structure on which a decision maker assesses *values*" and examines measurement errors and approximation errors.[40]

In another approach, values are not strictly individual preferences expressed in terms of pleasure and pain, but social values expressed in norms and ends, therefore in rules and objectives, and therefore in artifacts, whatever they are. These values are to be introduced as fundamental elements in the analysis of scientific activity as well as of business activity. Logical positivists also recognize the importance of values in political processes: "It is worth mentioning that ethical terms do not serve only to express feelings. They are calculated also to arouse feeling, and to stimulate action."[41] By indicating the links between dimensions, the design attempts to suggest how a hard tool such as accounting is related to values, how a description is also a prescriptive matrix, how representations are also actions in their context, how quantitative analyses are also policies. This is not intended as a criticism; on the contrary, it establishes the validity of accounting or research: truth is a social fact and verification or checking is a social process, as Ozbekhan notes, quoting Bronowski: "There is a social nexus which alone makes verification possible. . . . It follows that there is a principle that binds society together because without it the individual would be helpless to tell the true from the false."[42] The external relevance of accounting or accounting research lies in such a nexus. They have empirical meaning in spite of a value context because "what legitimizes

[39] Ibid.

[40] Hervé Le Lous, "Measures, Signals and Values" (Working paper 79-30, Brussels, presented at Fifth Workshop on Accounting in a Social Environment, the European Institute for Advanced Studies in Management, Stockholm, 1979), p. 25.

[41] Ozbekhan, "General Theory," p. 72, quoting Alfred Jules Ayer.

[42] Ibid., p. 76, quoting J. Bronowski.

valuations is the process by which the norm for any valuation is determined,"[43] that is, the political process.

To replace the economic metaphor, it seems possible to suggest the genetic[44] metaphor: the image of multiple pieces of social codes embedded in and transmitted by artifacts and the behaviors they determine. Accounting statements or researchers' works would therefore be fragments of social codes and carriers of the marks of their origins. This view gives to norms and rules a status that is superior to the one of mere conventions or postulates, or of Machiavelian devices.

It seems also that the approaches of accounting founded on parallels with linguistics are sensitive to the same questions. For instance, Jonsson-Lundmark advocates a link between semantics and pragmatics of accounting based on linguistic philosophy:

> Commenting on the necessity to consider also the semantical aspects of a language, Hardy (1978) observes that to him it seems apparent that a semantical rule is one of the biosocial phases of language; it is part of the conventional assignment of names within any speech community. The linguist therefore must recognize that speech is a social phenomenon and realize that the true meaning of a term is to be found by observing what a man does with it, not by what he says about it.[45]

Other authors have been sensitive to the study of languages as a shaper. Jain recalls how language influences the thinking process and asserts that inferences can be drawn from the field of linguistics, that accounting rules can be considered as analogous to a grammar.[46] He deduces from this hypothesis that accounting methods affect decision making. Belkaoui also founds his study on the Sapir-Whorf hypothesis according to which linguistic patterns determine behavior by affecting the ways of perceiving the world. He extends the study from grammatical rules (Jain's paper) to lexical characteristics.[47]

The systemic movement of the design which suggests that accounting is both a reflection and a shaper (a piece of social code) of its environment is inspired by these analyses, although the parallel between accounting and language is to be questioned. The three-fold distinction,

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[43] Ibid., p. 77.

[44] The metaphor of genetic codes has the important advantage of illustrating both stability (reproduction) and change (evolution).

[45] Birgitta Jonsson-Lundmark, "Accounting Theory Accounting Practice: Who Is to Be the Master?" (Working paper presented at the Fifth Workshop of Accounting in a Social Environment, European Institute for Advanced Studies in Management, Stockholm, 1979), p. 20.

[46] Tribhovan Jain, "Alternative Methods of Accounting and Decision Making: A Psycho-Linguistical Analysis," *Accounting Review* (January 1973): 95-104.

[47] Belkaoui, "Linguistic Relativity," pp. 97-104.

inspired from management science, which positions accounting as "things," the structure and elements of a culture, leads us to understand the social aspects of accounting with a genetic metaphor. Doing things, we forget the origins. Once norms are forgotten, rules are still applied. What are their meanings? If the difficulties are obvious, the attraction remains: how does accounting teach to think? How are we taught to think, particularly in the field of accounting? ". . . for after all we have been taught to think,"[48] and still are — by artifacts which determine the physical and conceptual framework of our questions.

Therefore, as a final remark, it is suggested that such attractive distinctions as positive/normative or descriptive/prescriptive and such a fundamental dichotomy as facts/values, which are typical of, and adapted to, a kind of knowledge could now be in a way *methodological obstacles* for accounting studies.

[48] Stafford Beer, "Below the Twilight Arch, a Mythology of Systems," *General Systems Yearbook,* vol. 196, pp. 9-20.

Current-Cost or Current Purchasing-Power Accounting? An Internationally Based Assessment of FASB Statement No. 33 on Financial Reporting and Changing Prices

KLAUS MACHARZINA and ADOLF G. COENENBERG*

The Financial Accounting Standards Board (FASB) recently issued Statement No. 33, "Financial Reporting and Changing Prices," according to which public companies of a certain size are required to disclose inflationary effects as supplementary information to the annual financial reports. Income from continuing operations measured at historic cost must be adjusted both for changes in the general price level, and at current cost of inventory and property, and plant and equipment. Also, the purchasing-power gain or loss on net monetary items and net increases or decreases in the current cost of inventory and property, and plant and equipment (that is, holding gains) must be disclosed net of inflation. Since the FASB requires current cost *and* general price-level adjusted financial information, some alternative European approaches are advocated in the present paper. In considering these developments, it is suggested that constant dollar accounting is neither useful nor appropriate, especially from the user standpoint.

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EARLY DEVELOPMENTS AND ACTUAL STATE

The inflation accounting debate has a long tradition in Europe. Since the great inflation after the first world war, a number of suggestions concerning accounting for the effects of inflation have been advocated. These go back to the early current purchasing-power versus current-cost controversy of German accounting academics in the 1920s, Mahlberg and Schmalenbach[1] on one side and Schmidt on the other.[2] Although the case for adjusting annual accounts by reference to current purchasing power (CPP) employing general price indices was convincingly argued by the former, the problems troubling the business world at that time related to the short and medium control over liquidity and the ability to replace assets sold or scrapped at greatly increased prices. Accordingly, Schmidt's current-cost accounting (CCA) proposal could be seen to be more relevant than a CPP type of solution, and it was again taken up in more recent writings, particularly by Sommerfeld, Hasenack, Hax, Feuerbaum, and Sieben.[3] Yet the early controversy has given rise to an extreme heterogeneity of different approaches. Consequently, it was doubtful whether German accountants would ever arrive at a unified and practical solution to the inflation accounting problem.

Moreover, it was surprising that a German inflation accounting proposal issued in 1975 has obviously influenced other European countries' attempts to solve the inflation-accounting problem. The proposal is mainly concerned with eliminating the effect of price changes from published accounts and is basically seen as a question of how each business entity must make adjustments for the *specific* price increases of goods and services purchased to maintain the productive capacity of

[1] W. Mahlberg, *Bilanztechnik und Bewertung bei schwankender Währung,* 3rd ed. (Leipzig: Gloeckner, 1923); and E. Schmalenbach, *Dynamische Bilanz,* 4th ed. (Leipzig: Gloeckner, 1926), pp. 217-73.

[2] F. Schmidt, *Die organische Bilanz im Rahmen der Wirtschaft* (Leipzig, 1921). Idem., *Die organische Tageswertbilanz,* 3rd ed. (Wiesbaden: Gloeckner, 1951).

[3] H. Sommerfeld, "Eudynamische Bilanz," in *Lexikon des Kaufmannischen Rechnungswesens,* ed. Karl Bott, 2nd ed. (Stuttgart: Muth, 1955), col. 980; E. Hasenack, "Der Bilanztheoretische Streit Riegers gegen Schmalenback im Licht von Zwei Briefwechseln," in *Betriebswirtschaftliche Forschung und Praxis,* vol. 18, 9 (1966), pp. 484-98; K. Hax, *Die Substanzerhaltung der Betriebe* (Köln-Opladen, 1957); E. Feuerbaum, *Die polare Bilanz* (Berlin, 1966); G. Sieben, *Kritische Würdigung der externen Rechnungslegung unter besonderer Berücksichtigung von Scheingewinnen, Zietschrift für betriebswirtschaftliche Forschung* (1974), p. 153; for an extensive discussion, see also A. Coenenberg and K. Macharzina, "Accounting for Price Changes: An Analysis of Current Developments in Germany," *Journal of Business Finance and Accounting* (Spring 1976): 53-68.

the business intact. With a background of substantial inflation, it is important to devise an accounting system to safeguard the continued existence of the *entity* and its ability to provide jobs rather than to give a hypothetical average *investor* a revised profit to reflect the general decline in the purchasing power of money. This opinion is partly in accordance with and partially in contrast to FASB Statement No. 33 which calls for both types of information, one dealing with the effects of general inflation and the other dealing with the effects of changes in the prices of resources used by the enterprise. It is interesting to learn that according to FASB's empirical evidence, preparers of financial statements and public accounting firms emphasize the need to provide general price-level adjusted accounts whereas users generally prefer information dealing with the effects of specific price changes.[4] One is tempted to suggest that FASB Statement No. 33 reflects a compromise between different interest groups which involves additional burden and cost on firms because of the rather complex system of computed information. If one adopts the assessment criterion derived from FASB Statement of Financial Accounting Concepts No. 1 according to which the primary objective of financial reporting is the provision of decision-making information for *users,* one would have expected a clear-cut decision in favor of current-cost adjusted annual information — especially when users have explicitly expressed their preference for this type of information. The present paper attempts to argue why a current-cost based system has been suggested in Germany and also in other European countries.

MAINTENANCE OF A COMPANY'S PRODUCTIVE CAPACITY

In the overall inflation accounting debate, five major so-called capital maintenance concepts are being discussed. These imply different definitions of income.[5]

1. "Nominal" equity capital maintenance — While maintaining the amount of the shareholders' interest in the company at the beginning of the year, which is regarded as the company's capital, income of the year is defined as any gains arising during the year which may be distributed.
2. "Real" equity capital maintenance — Capital is regarded as the

[4] Financial Accounting Standards Board, *Financial Reporting and Changing Prices,* Statement of Financial Accounting Standard No. 33 (Stamford, Conn.: FASB, 1979), p. iii.

[5] See, for example, *Inflation Accounting,* Report of the Inflation Accounting Committee (London: Her Majesty's Stationary Office, 1975), pp. 32-38.

amount of the shareholders' interest in the company at the end of the year equivalent in "purchasing power" to the monetary amount of this interest at the beginning of the year. Income of the year is defined as any gains arising during the year which may be distributed while maintaining the purchasing power of the shareholders' interest in the company at the beginning of the year.

3. Physical capital maintenance — Capital is regarded as the productive capacity of the company. Income of the year is defined as any gains arising during the year which may be distributed while maintaining the productive capacity of assets held by the company.

4. "Real" monetary capital maintenance — Capital is regarded as the amount of assets held by the company at the beginning of the year adjusted to their equivalent in terms of "purchasing power" at the end of the year. Income of the year is defined as any gains arising during the year which may be distributed while maintaining the "purchasing power" of the amounts in the balance sheet representing the assets of the company at the beginning of the year.

5. Economic capital maintenance — Capital is regarded as the "value to the business" of the company's assets. Income of the year is defined as any gains arising during the year which may be distributed after charging for the "value" of the company's assets consumed during the year.

Exhibit 1. Capital and Profit Concepts

Capital maintenance concept	Monetary		Physical	Economic
	Nominal	Real wealth		
Profit measurement concept	Historic cost	Current purchasing power	Current cost	Net present value

The valuation of assets and liabilities and the measurement of income largely depend on which capital maintenance concept is being used. It is suggested that in the light of a generally recognized societal function of a business, the clearly equity-oriented approaches do not seem to be worthwhile concepts to follow. Therefore, the discussion will be restricted to concepts 3 to 5 which wholly or partially imply the entity idea.

"Real" monetary capital maintenance which, owing to its relatively simple restatement procedures by the use of uniform price indices, is a convenient practical approach for measuring income. It could only be regarded as sufficient for achieving capital maintenance of a company when specific price changes of individual assets and resources would correspond to changes in the general price level.

In Germany, the concept of real monetary capital maintenance is now unanimously believed to be deficient because maintenance of the business in the sense of job security, income, and a tax resource cannot be achieved simply by maintaining the purchasing power of the invested capital. This can only be guaranteed through maintaining a firm's performance potential.

Economic capital maintenance seems to provide an ideal measure for determining the economic efficiency of a firm — net present value being the measuring unit embracing all factors which determine a company's future efficiency subject to the information available at the time when the calculations are made. The earning power is supposed to be maintained when a sufficient amount out of the earnings can be retained in the company as potential expenditure for performance capacity. This is intended to guarantee the same level of income in the future taking into account price variations, technological and demand changes, and new competitive conditions. The definition of income which relates to this concept of capital maintenance is known by the term "economic profit." The economic profit corresponds to any changes of the net present value in a period plus withdrawals (disinvestments) minus contributions (investments) or, in other words, to the interest on the net present value at the beginning of a period.

The economic profit concept as an approach to capital maintenance incorporating the principle of "nominal" equity capital maintenance has been suggested.[6] The economic profit is shown in a supplementary statement to the annual financial statements along with disclosure of the underlying computation methods to the fullest extent possible. In the case of the economic profit being lower than the nominal profit, only the economic profit is available for distribution; the difference between the two amounts is to be transferred to a capital maintenance reserve account. Only if there is an accumulated maintenance reserve can profits available for distribution be recorded at a higher level than the

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[6] See D. Schneider, *Ausschüttungsfähiger Gewinn und das Minimum an Selbstfinanzierung, Zertschrift für betriebswirtschaftliche Forschung* (1968), p. 1; and idem, *Investition und Finanzierung,* 3rd ed. (Köln-Opladen, 1974), p. 258.

nominal profit, given that the economic profit is higher than the nominal profit.

This and similar proposals based on the economic profit concept could not, however, gain acceptance owing to their obvious lack of practicability. The main reasons for this are the necessity of an annual total valuation of the company, together with the problem of subjective judgment involved in making the estimates as to future events.

The concept of *physical capital maintenance,* which is probably not the optimal answer to inflation accounting, satisfies both theoretical and practical needs, at least at an acceptable level. It suggests that a company's capacity to generate future net cash flows is maintained by retaining the amount of annual earnings which is sufficient to replace the physical assets as they are consumed or worn out. The consumption and wear are measured at current replacement values.

Basically, this concept leans on the suggestions for current-value accounting ("organische Tageswertbilanz") made by Schmidt.[7] Edwards and Bell also developed a concept of income measurement which is very similar to Schmidt's proposal. A similar one was also developed by Engels in Germany.[8]

The aim of current-value accounting, according to Schmidt, is to guarantee a company's capital maintenance in accordance with the performance potential of the national economy as a whole. Accordingly, profits which are solely caused by price variations should be separately shown from operating profits in the income statement. Inflationary profits are caused by price variations of a company's resources between the time of their acquisition and their consumption. Rising prices result in fictitious gains; falling prices result in fictitious losses. *Inflationary profits can be eliminated with the use of a general price-level approach only when specific price changes of individual production resources correspond to changes in the general price level.* To account for inflationary profits resulting from specific price changes, replacement costs are used in the balance sheet as at balance sheet date. In this way, and by reporting expenses on the basis of current values as at purchase date, the amount of income retained is that which is required to repeat the production process at the same level. The difference between the historic and the current value of expenses incurred is transferred to a revaluation reserve account in the balance sheet which, according to

[7] Schmidt, *Die organische Bilanz,* and *Die organische Tageswertbilanz.*

[8] E. O. Edwards and P. W. Bell, *The Theory and Measurement of Business Income* (Berkeley, 1961); and W. Engels, *Betriebswirtschaftliche Bewerlungslehre im Licht der Entscheidungstheorie* (Köln-Opladen: Westdeutcher Verlag, 1962).

the direction of price variations, results in positive or negative changes in equity.

Such revaluation of expenses in the income statement does not necessarily result in a restatement of assets in the balance sheet. Within the concept of current-value accounting, however, the balance sheet has the function of reporting a company's resources. As it is impossible to record the total economic value of the firm by measuring assets item by item, an "objective" market price must be applied. Balance-sheet items are thus measured at replacement prices effective on the balance-sheet date with a counter entry in the revaluation reserve account. The latter contains all revaluations and inflationary profit corrections.

CAPITAL MAINTENANCE AND GEARING

In Germany, there is a convergence of opinions that inflationary effects cannot be accounted for without reference to a company's gearing, that is, debt/equity ratio. As in reality, debt normally exceeds the amount of monetary assets, and inflationary profit corrections can be restricted to nonmonetary assets, and this only to the extent that they are financed by equity funds.

If debt is only committed to monetary assets, the related inflationary gains and losses cancel each other. If, however, debt is invested in nonmonetary assets, then it can be assumed that the latter will also be replaced by the use of external funds. This would result in leaving the company's gearing and risk position unchanged. In this case, the consumption of externally financed nonmonetary assets can be measured in the income statement at historical cost.

If, instead, all expenses were measured by using the current-value method without regard to a company's debt/equity ratio, this would result in a permanent increase of equity because of the decrease of profits and the automatic restriction of profit distribution. This means that there is a correction for debt-financed assets which will never result in actual cash expenditures because debt will be due at its nominal (not current cost) amounts. Therefore, the amount set aside would permanently increase equity subject to an equivalent flow of earnings.

From the informational standpoint, the surplus is distorted because inflationary profits arising from externally financed assets are deducted from surplus without special disclosure. This would result in equity being restated to exactly the amount of this additional "decrease" because assets which were externally financed are now financed by an equivalent proportion of equity funds. The measurement function of income with regard to profit distribution is also limited because part

of the revenue is now declared as expense and accordingly protected from distribution. This part, however, is distributable to the extent that the amount related to externally financed assets will in the future be financed again from the same source. This restricts shareholders in their decisions concerning the appropriation of profits.[9]

THE GERMAN INSTITUTE'S PROPOSAL HFA 2/1975

A similar line of reasoning is reflected in the proposal 2/1975 "Accounting for Capital Maintenance in the Measurement of Company Profits"[10] issued by the main technical committee (HFA) of the Institut der Wirtschaftsprüfer in Deutschland, the German Institute of Public Accountants (IdW). The proposal is not binding in the sense of being a "standard of inflation accounting." It is based on three principles: (1) entity approach to capital maintenance; (2) net (substantialistic) capital maintenance; and (3) supplementary disclosure.

The HFA recommends the provision of "capital maintenance statements." These represent supplementary information which public companies and other companies covered by the "Disclosure Act"[11] should include in the director's report, and other companies should add to their set of annual statements. The calculation should be taken into account when determining a company's profit distribution and reserve policy. In the case of companies which are subject to compulsory audit, the supplementary statements are to be included in the scope of the audit.

Capital maintenance statements, according to the recommendation of the HFA, should only relate to an adjustment of the income statement. It is, however, appreciated that by doing so, the financial position of a company in a situation of changing prices is not correctly reported. The HFA has only gone so far as to recommend that "the effects of

[9] Conenberg and Macharzina, "Accounting for Price Changes," p. 61; and A. Coenenberg et al., *Jahresabschluss und Jahresabschluss-analyse,* 3rd ed. (München, 1976), p. 511; and K. Macharzina, "The Impact of Inflation on German Accounting: Theoretical Background and Professional Issues," *The Impact of Inflation on Accounting: A Global View* (Urbana, Ill.: Center for International Education and Research in Accounting, 1979), pp. 225-40.

[10] HFA, "Zur Berücksichtigung der Substanzeshaltung bei der Ermittlung des Jahresergebnisses," Stellingnahme 2/1976, *IdW Fachnachrichten,* no. 12(1975): 193-94.

[11] Regardless of legal form, businesses fall within the scope of this act if among (1) balance-sheet total is equal to or exceeds DM 125 millions or (2) annual sales revenue is equal to or exceeds DM 250 million, or (3) the average work force during the accounting period is equal to or exceeds 5,000 employees. Any two of these criteria apply.

increased replacement values on the financial position in the internal reports must be watched."[12]

The following form of the supplementary statement is suggested:

Additional depreciation of fixed assets (wasting assets)	....
Amount necessary to maintain inventory	....
Total of necessary adjustments (inflationary profits)	....

Inflationary profits are defined as the difference between depreciation of fixed assets and cost of sales on the historical cost and replacement cost basis less an adjustment for that part of fixed assets and inventories which are not financed by equity capital.

Fixed assets are adjusted according to specific price indices which are available from the Federal Statistical Office and the major boards of the various industries. Correction on inventory is as follows: valuation of year-end inventories in prices at the beginning of the year; comparison with the value in year-end prices to obtain the amount of the actual price change; application of this percentage to the value of inventories at the beginning of the year; and elimination of the resulting inflationary profit on inventories insofar as these are financed by equity.

It is assumed that the company's equity is employed to finance fixed assets first and inventories second. Under this assumption, assets are classified according to their monetary and maturity properties. As a first step, debt is related to the total amount of monetary assets. Then the remaining amount of external funds is related to short-, medium- and long-term nonmonetary assets, in that order. In addition to the calculation, the measures actually taken to guarantee the maintenance of the company's capital should be disclosed, for example, a transfer of a part of the annual profit to the free reserve account. This, incidentally, is fully taxable which results in the company being forced to earn twice as much gross to maintain capital intact.

The information function of annual financial statements relates to the reporting of both financial position and performance of a company. In a situation of inflation, the strict fulfilment of this objective requires that financial statements measured at historical costs be supplemented by an appropriate calculation to adjust for the impact of price changes. Clearly, the recommendation of the HFA does not satisfy these requirements.

[12] HFA, "Zur Berücksichtigung," p. 193.

One should, however, appreciate on the one hand the rigid legal situation in Germany which cements the historical cost rule and does not allow for revaluations of property, and, on the other hand, the necessity of a practical solution. These constraints led to intentional limitations of the German institute's proposal.

As regards its acceptance and application with companies to date, the effect can be called negligible. Only some large groups such as Siemens and Mannesmann disclose inflationary profit corrections in their director's reports. While Siemens, for example, was able to state in recent years that reported profits did not include any inflationary profits because of the fullest use of tax-allowed accelerated depreciation, beginning with its 1976 report, it published that "there was no longer an adequate compensation for the price increase of our equity financed assets."[13] Accordingly, DM 73 million (DM 75 million in 1977) of an annual income of DM 606 million (DM 650 million in 1977) were required to offset inflationary profits to maintain the company's capital. These inflationary profits are calculated taking into account the proportion of fixed assets and stocks financed by equity funds.[14]

There is disagreement in German practice regarding how to account for the gain or loss on monetary items. In the case of neglecting monetary assets because there are not any replacement values for them, the "financing gap," which is caused by the fact that sales proceeds are not received in cash at the actual date of the sale, is not recognized. Schmidt suggested that companies should confine their external borrowings to the amount of their monetary assets to avoid this problem.[15] Yet this proposal does not seem to be realistic considering the possibility of gaining in purchasing power by making use of external finance. As a possible solution, it has been suggested that the gain or loss on net monetary liabilities or assets, calculated in the same way as under the CCP method, should be deducted from or added to "gross" inflationary profits.[16]

The solution to another problem is also open to debate. This is the case where insufficient amounts from depreciation have been set aside for asset replacement in the profit and loss account. The obvious possibility to modify inflationary profit corrections on a CC basis by addi-

[13] Siemens, *Annual Report 1976,* p. 46.

[14] In the 1978 report, Siemens states: "Our calculations showed, . . . that due to our conservative use of statutory valuation alternatives the net income for the year does not include any such inflationary profits," p. 58.

[15] Schmidt, *Die organische Bilanz,* and *Die organische Tageswertbilanz.*

[16] See S. J. Gray, "The Defects of ED 18 and the Way Ahead for CCA," *Accountants Magazine* (July 1977): 290.

tional backlog depreciation could result in amounts greater than the revaluation surplus being transferred.[17] Backlog depreciation can also be neglected when funds equivalent to a higher depreciation rate are reinvested in assets which relate to an equivalent price increase, and when their consumption is also measured at replacement prices. In this case, backlog depreciation will not be necessary because there is no financing gap. This suggestion is supported by empirical evidence and results of model simulations.[18]

In the German proposal, there are further problems employed which remain unsolved: the problem of eliminating technological progress from specific price indices and the problem of defining replacement values and determining the financing gap in cases where there is a change in production technology, for example, when assets will no longer be replaced.[19] The latter example indicates the limitations of the concept of physical capital maintenance.

OTHER EUROPEAN DEVELOPMENTS

Although current-cost accounting is not obligatory in the Netherlands, it is more widely practiced there, particularly for managerial purposes, than in Germany. There have, however, been similar developments of replacement-value accounting in both countries because when Schmidt proposed his CCA model in the 1920s, Limperg also advocated a capital maintenance-based current-value concept of accounting in the Netherlands. Recent investigations suggest that today about 37 percent of Dutch listed companies apply CCA for calculation of their profit figure,[20] but only about 18 percent show their assets at current values in the balance sheet or disclose CCA information.

Although Dutch accountants do not seem to believe that CCA is the complete answer to the inflation accounting problem, their institute (NIVRA), obviously in recognition of the necessity to support CCA application in the business world, published an appendix to the IASC's then E 6 "Accounting for Changing Prices" (January 1976). That appendix recommends supplementary information to the annual accounts of companies by combining specific and general current valuations similar to the proposals in Britain's exposure draft ED 18, and

[17] Ibid.

[18] See W. Busse von Colbe, "Auswirkungen inflatorischer Preissteigerungen auf Gewinne und Finanzierung," *Zeitschrift für betriebswirtschaftliche Forschung*, (Kontaktstuduim, 1, 1976), p. 11.

[19] Ibid.

[20] See G. G. M. Bak, "Inflation Accounting in the Netherlands (Amsterdam, December 1977).

aims at adjusting for changes in net equity by reference to changes in the value of money.

In conclusion, it may be suggested that the German practice of inflation accounting to date seems to be more logical than the Dutch one which appears to disregard the method of financing the business. This aspect of current-value accounting was originally also neglected in ED 18 but was taken up in the British Accounting Standards Committee's interim recommendation "Inflation Accounting" (the so-called Hyde Guidelines) in 1977[21] and maintained in the recent ED 24 "Current Cost Accounting" which replaced ED 18 in 1979.

The interim guidelines on inflation accounting seem to go very much along the German line of reasoning. In contrast to ED 18, only supplementary information comprising a cost of sales adjustment to the historic cost profit, a charge for depreciation on a current-cost basis, and an adjustment to take into account the effects of gearing was required.

The similarity to the German productive capacity maintenance concept is evident. In the latter, the annual income attributable to shareholders should measure the amount of distributable profits under the following assumptions: productive capacity is defined by the nonmonetary assets used for the operation of the business, and the firm is assumed to have a constant debt/equity ratio over time. Also, inflationary profits are only eliminated to the extent that they are attributable to shareholders. The gearing adjustment is similar to this method, and the cost of sales adjustment and the depreciation adjustment correspond to "inflationary profits."

However, ED 24, which became a standard on March 31, 1980, and applies to all listed companies and other entities which meet any two out of three criteria[22] (subject to specific exceptions), goes further by the following:

1. Introducing separate from the gearing adjustment a monetary working capital adjustment which in effect extends the cost of sales adjustment to other working capital items such as trade debtors, prepayments, and trade bills receivable, plus stocks not subject to a cost of sales adjustment, less trade creditors, accruals, and trade bills payable insofar as they arise from day-to-day business operations as distinct from capital

[21] Accounting Standards Committee, "Inflation Accounting: An Interim Recommendation" (London: ICAEW, 1977).

[22] (1) Turnover of £5 million and more,
(2) Total assets of £2,5 million and more,
(3) 250 and more employees.

transactions; cash and bank overdraft may be included where material.
2. Also, a current-cost balance sheet which may be in summarized form is called for to allow for estimates of the return on investment on a current-cost basis. It includes a capital maintenance reserve which reflects revaluation surpluses and deficits arising from changes in prices of fixed assets and stock, and the monetary working capital adjustment. Such amounts cannot be distributed unless the operating capacity of the business will not be impaired.
3. Moreover, listed companies are required to disclose current-cost earnings-per-share information.

The idea behind adjusting monetary working capital, and not just stocks, is that current-cost operating profit should be deleted after allowing for the maintenance of net working capital. Besides current-cost operating profit, the current-cost income statement would show the current-cost profit attributable to shareholders derived after making the gearing adjustment in the proportion which net operating assets (fixed assets, stock, and monetary working capital) financed by borrowing bear to the total net operating assets. Altogether, annual financial statements would include historical cost accounts, current-cost accounts, and explanatory notes. Current cost of net operating assets will be measured at their value to the business which would normally be the net current replacement cost, or its recoverable amount if diminution in the value of the assets is permanently lower than replacement cost.

It is debatable whether this tendency will also be reflected in other European countries' regulations. The European Commission's Fourth Directive[23] which required member states of the European Community to bring its provisions into force until 25 July 1980 does not generally permit valuations above historic cost (Article 32). It does allow, however, for member states to permit or require the use of inflation accounting in place of historic cost accounting, provided they inform the commission that they reserve the right to authorize or require such a system. A number of conditions for the use of inflation accounting are decreed in Article 33. Surpluses arising must be taken to a revaluation reserve, and this reserve may not be distributed unless realized. National law must define the limits and rules for application, and the notes on the accounts must show the method by which the values shown are calculated. Historical cost figures must continue to be disclosed for all balance-sheet items, but the profit-and-loss account may be drawn

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[23] Commission of the European Communities, *Fourth Directive for Coordination of National Legislation regarding the Annual Accounting of Limited Liability Companies* (July 1978).

up as an ordinary historical profit-and-loss account with the inflation adjustments shown separately. The revaluation of specific fixed assets is also allowed, provided the surpluses are not distributable unless realized and historical cost information continues to be given.

It is understood that the German government has decided not to permit or require inflation accounting. In their recent proposal regarding the reform of company accounting, which is mainly concerned with the integration of the Fourth Directive into German company law, the Accounting Committee of the German Association of University Teachers in Business Administration advocates that the impact of inflation on the asset and financial position and results of a company be commented upon in the director's report. It is suggested that the amount of profit corrections necessary to maintain a company's equity capital be stated.[24] From the standpoint of the British and North American inflation accounting proposals, and compared to the early German inflation accounting models, this is a rather weak requirement. Also, due to conservatism there will not be much inflation accounting in the German practice.[25] The major conclusion, however, which can be drawn from the German model is that price-level elements in an inflation accounting system do not seem to be the right answer; information on the general decline in the purchasing power of money may be interesting for a hypothetical average investor but may not be too helpful with respect to different actual users' preferences.[26] It is therefore suggested that this message should be taken up not only in the English but also in the American approach to accounting for inflation. Hopefully, the International Accounting Standards Committee will also consider this when it issues its new exposure draft of a proposed standard on accounting for changing prices.

[24] Kommission Rechnungswesen im Verband der Hochschullehrer für Betriebwirtschaft e.v., "Reformvorschläge zur handelsrechtlichen Rechnungslegung" *IdW Fachnachrichten,* vol. 4, no. 8 (August 1978): 222. For a summarized version, see also "Proposal for the Reform of Commercial Accounting Law in Germany," *Journal of Business Finance and Accounting,* vol. 6, no. 3 (1979): 331-37.

[25] See, for example, Siemens, *Annual Report 1978,* p. 57.

International Journal of Accounting (Spring 1979): 29-46.

[26] Haim Falk, "Current Value Accounting Preferences: The Case for Canada," *International Journal of Accounting* (Spring 1979): 29-46.

The Independence Issue Concerning German Auditors: A Synthesis

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INTRODUCTION

One of the major issues facing the German accounting profession is the independence of auditors from their clients. German auditors (*Wirtschaftsprüfer*) have been the target of severe criticism in the financial press and in the accounting literature. Some of this criticism is similar to that expressed in the United States which questions the auditors' ability to remain independent from those who pay their audit fees.

Even though the question of independence of the Wirtschaftsprüfer (WP) has been raised from time to time in the past, the call for better conventions and regulations has been stressed more in recent years. Various cases of corporate bankruptcy occurring shortly after the issuance of an unqualified opinion have generated doubts concerning the value of the WPs' work and their ability to arrive at objective and unbiased decisions. Suggestions have been made to strengthen the WPs' status of independence by having more specific rules guiding the auditor's conduct, changing the liability laws to allow a third party to sue for ordinary negligence damages, and establishing a government agency similar to the Securities and Exchange Commission (SEC).

This paper deals with the issue of independence affecting German auditors by reviewing and discussing the relevant German accounting literature and German independence regulations. This discussion should

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be of interest to the U.S. accounting profession since it also faces increased criticism concerning its status of independence by congressional subcommittees as well as recent efforts by the SEC to discourage auditors from performing certain management advisory services for audit clients.

INDEPENDENCE REQUIREMENTS

There is general agreement among auditors and users of audited financial statements that independence of the external auditor is important. Many consider it the most important attribute of the auditor and the auditing profession. Independence has been defined as the "ability to act with integrity and objectivity."[1] This type of independence, also referred to in the U.S. accounting literature as independence in fact, is only one of the two components of what may be called "total independence." The other component is known as independence in appearance. Whereas independence in fact deals with the auditor's state of mind or attitude toward the audit object, independence in appearance, as Arens and Loebbecke note, "is dependent on others' interpretation of this independence (in fact)."[2]

A WP can look for guidance concerning relevant independence requirements to the Professional Law (*Wirtschaftsprüferordnung,* or WPO), the Directives of the Chamber of Auditors (*Wirtschaftsprüferkammer,* referred to here as WPK), and the Corporation Law of 1965 (*Aktiengesetz*). The Professional Law mandates that a WP must conduct his professional audit duties independently, conscientiously, discreetly, and responsibly. It also states that a WP must not engage in activities which are incompatible with his professional duties or with the reputation of the accounting profession. The Professional Law requires a WP to decline an audit engagement if there is reason to believe that the circumstances will cause his independence to be questioned.[3] Thus, German auditors, as well as their U.S. counterparts, are required to be independent in fact and independent in appearance. Richter considers

[1] American Institute of Certified Public Accountants, *Code of Professional Ethics,* March 1975 ed. (New York: AICPA, 1975), p. 6.

[2] A. A. Arens, and J. K. Loebbecke, *Auditing: An Integrated Approach* (Englewood Cliffs, N.J.: Prentice-Hall, 1980), p. 50.

[3] *Gesetz über eine Berufsordnung der Wirtschaftsprüfer (Wirtschaftsprüferordnung) i.d.F. der Bekanntmachung der Neufassung v. November 5, 1975* (Düsseldorf: IdW-Verlag GmbH, 1976), pp. 32-37.

both requirements of the Professional Law to be of equal importance.[4] It should be noted, however, that the Professional Law does not state which circumstances would impair auditors' independence.

The Chamber of Auditors derives its legal authority to issue the directives from the Professional Law. These directives elaborate on the requirements of auditors' independence in more detail than the Professional Law. They state that a WP must decline an audit engagement when his independence is impaired or if he is biased, even in situations for which the applicable law concerning the selection of an auditor would not prohibit such an engagement. The directives list a variety of sensitive auditor-client relationships which may impair the auditor's appearance of independence.[5]

The Corporation Law of 1965 specifies how the financial statements of a corporation must be prepared and mandates that they be audited by WPs. Paragraph 164 of this law addresses the independence issue by listing a limited number of cases in which auditors' independence is presumed to be impaired. Basically, the Corporation Law of 1965 prohibits a WP (or qualified accounting firm) from auditing a company if the WP had an employee-employer relationship with the company during the last three years prior to appointment as auditor or if the WP is a legal representative or member of the supervisory board[6] of the company or of a business entity which is in some way associated with the company to be audited.

For circumstances not specifically covered by paragraph 164 of the Corporation Law of 1965, the auditor must be guided by the principles of the profession which dictate that any audit engagement in which it is felt that independence is impaired should be declined. Since only a few auditor-client relationships are, *a priori,* disallowed by the Corporation Law of 1965 and the directives of the Chamber of Auditors due to presumed lack of independence, a WP must rely on his or her own interpretations of what the general requirement of independence in appearance means for many auditor-client relationships. This, it seems, is the root of the independence problem in Germany.

[4] M. Richter, "Die Unabhängkeit des Wirtschaftsprüfers," Universität des Saarlandes (July 1976), p. 51.

[5] Wirtschaftsprüferkammer, *Richtlinien für die Berufsausübung der Wirtschaftsprüfer und vereidigten Buchprüfer* (1 December 1977), pp. 7-9.

[6] German corporations have two boards of directors, namely the supervisory board and the board of management. The supervisory board's function is to oversee the actions of the board of management, and is not involved in formulating management decisions.

DISCUSSION OF THE ISSUES CONCERNING WP INDEPENDENCE AND SOLUTIONS SUGGESTED IN THE GERMAN ACCOUNTING LITERATURE

The German accounting literature has dealt extensively with the problem of WP independence. An entire issue of the *Betriebswirtschaftliche Forschung und Praxis* (an academic accounting journal) published in 1976 was devoted to this subject and the recent Bochumer Symposium composed of leading WPs and accounting educators dealt with auditor independence in great detail.[7]

Even though the German concept of independence is equivalent to the U.S. concept of independence which consists of two components, independence in fact and in appearance, the German independence issue is sometimes discussed in terms of three, not two, components. The components are listed here, followed by their English translation: (1) *Unabhängigkeit* (independence, autonomy); (2) *Unbefangenheit* (impartiality, freedom from bias); and (3) *Besorgnis der Befangenheit* (literally, fear or apprehension of partiality). The translations are taken from Cassel's *German and English Dictionary.*

There is no doubt that *Unabhängigkeit* and *Unbefangenheit* are very closely related and usually are used together, sometimes interchangeably, when referring to the auditor's ability to act with objectivity and integrity during an audit. The *Wirtschaftsprüferkammer* in its directives uses the two terms together when it mandates that a WP must be free from influences that might impair *Unabhängigkeit* and *Unbefangenheit* when performing the (audit) duties. Some authors, however, perceive significant differences between the two terms. Jäckel contends that *Unabhängigkeit* refers to the legal and economic freedom (*Bindungslosigkeit*) of the auditor from the audit client.[8] *Unabhängigkeit* represents to him a relationship readily discernable by an outside observer. Jäckel believes that *Unbefangenheit* refers to the auditor's inner unbiased attitude toward the audit and the audit client. Both concepts are in close relationship to one another with *Unbefangenheit,* according to Jäckel, being the more encompassing requirement.

This definition of *Unbefangenheit* corresponds closely with the U.S. term of independence in fact. Richter refers to *Unbefangenheit* as *fak-*

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[7] Papers presented with subsequent panel discussions are compiled in W. Busse von Colbe and M. Lutter, eds., *Wirtschaftsprüfung Heute: Entwicklung oder Reform?* Ein Bochumer Symposium (Wiesbaden: Verlag Dr. Th. Gabler, 1977).

[8] G. Jäckel, *Die Unabhängigkeit der Abschlussprüfer bei der Pflichtprüfung von Aktiengesellschaften der Öffentlichen Hand* (Hamburg: R. V. Decker Verlag, G. Schenk GmbH, 1960), p. 38.

tische Unabhängigkeit, which is the literal translation of independence in fact.[9]

Unabhängigkeit, on the other hand, seems to correspond more closely to the U.S. term of independence in appearance, if Jäckel's definition is followed. To pursue Jäckel's reasoning, *Besorgnis der Befangenheit* also represents the concept of independence in appearance (actually, the appearance of dependence) since, for *Besorgnis der Befangenheit* to exist, it is not necessary to prove that the auditor is not independent in fact (*unbefangen*). It suffices if a third party may legitimately question the auditor's independence status.

To summarize, Jäckel's interpretation of the terms *Unabhängigkeit* and *Besorgnis der Befangenheit* both correspond closely to the U.S. concept of independence in appearance. However, Jäckel categorizes independence in appearance as *Unabhängigkeit* if it refers to an auditor-client relationship prohibited by the casuistry (a listing of cases or guidelines concerning questions of conduct or conscience by the application of general principles of ethics) of paragraph 164 of the Corporation Law of 1965, or as *Besorgnis der Befangenheit* if it does not. *Besorgnis der Befangenheit* is therefore a general catch-all clause which complements the specific casuistry.[10]

It seems that this distinction is somewhat academic. Many consider *Unabhängigkeit* and *Unbefangenheit* to be practically synonymous, both corresponding closely to the U.S. concept of independence in fact, that is, the *auditor's* perception of his ability to make objective audit decisions. Independence in appearance is usually referred to as *Besorgnis der Befangenheit,* that is, a legitimate *third party's* perception of the auditor's independence status.[11] Consequently, the casuistry of paragraph 164 of the Corporation Law of 1965 is considered by these authors to be a description of auditor-client relatonships dealing with *Besorgnis der Befangenheit* (independence in appearance) only.

In this paper, *Besorgnis der Befangenheit* is interpreted as the U.S. concept of independence in appearance (or lack of it). *Unbefangenheit* is translated as independence in fact. *Unabhängigkeit* is translated as independence (or independence in fact if the author used it interchangeably with *Unbefangenheit*), unless it is apparent that the author uses *Unabhängigkeit* according to Jäckel's definition, in which case it is translated as independence in appearance.

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[9] Richter, "Die Unabhängkeit," p. 1.
[10] Jäckel, *Die Unabhängigkeit,* p. 38.
[11] Richter, "Die Unabhängkeit," pp. 1-3.

Auditor-Client Relationships That May Impair Auditors' Independence in Appearance

Independence in fact, as already noted, is concerned with the auditor's mental attitude toward the audit object. Wysocki concludes correctly that such an independence concept cannot be codified into specific professional guidelines.[12] Realizing this, rule makers in Germany, as well as in the United States, try to attack the independence problem by utilizing the second component comprising the "total independence" concept — independence in appearance. They specify a number of auditor-client relationships in which lack of auditors' independence is suspected, that is, the auditor is not considered independent in appearance. Wysocki agrees that it is of no concern in these cases whether the auditor is indeed independent in fact or not.

Auditor-client relationships that may impair independence in appearance have been categorized in a number of different groups and subgroups. Wysocki's groupings of the causes that may infringe upon auditors' independence in appearance involves only two types of auditor-client relationships which seem to cover every situation. They are relationships in which the auditor (1) has a self-interest (including economic or other personal interest) in the audit results, and (2) must consider someone else's interest (economic or personal) in the audit results.

Personal self-interest is considered to be present in situations where the auditor has a financial interest in the audit either as a stockholder or creditor. Economic self-interest is defined by Wysocki as the auditor's dependency on the audit fees from a particular client, that is, the economic necessity for the auditor to retain the client for future engagements (*Kundenabhängigkeit*). Other personal self-interest includes any auditor's relationship to the audit object, such as a situation where an auditor must pass judgment on audit evidence which he or she helped create.

Most discussions concerning the independence concept, however, deal with the relationships of the auditor to a third party which could affect his objectivity toward the audit work. Wysocki cited the directives of the WPK which caution that independence in appearance may not be present for relationships between the auditor and someone affected by the audit results that are of a personal, family, or business nature.

Wysocki realizes that the limited specific guidelines available to the WP in determining which relationships will impair independence in

[12] K. V. Wysocki, *Betriebswirtschaftliches Prüfungswesen, Prüfungsordnungen und Prüfungsorgane* (München: Verlag Franz Vahlen, 1972), p. 131.

appearance are not complete by any means. He cites as an example of the type of auditor-client relationship not covered by any specific rules a situation in which a close relationship exists between an auditor and a high-level executive of an audit client which may impair the auditor's independence in appearance.[13] This lack of extensive guidelines concerning impairment of independence in appearance for specific auditor-client relationships is one of the major criticisms found in the German accounting literature.

Criticism of the WP Profession's Independence Status in the German Accounting Literature

The auditor independence issue has become important during recent years because of a number of widely publicized bankruptcies of corporations whose financial statements had been audited by WPs and had received unqualified auditors' opinions.[14] The popular press may have been unfair in some cases by generalizing from some unfortunate incidents to the entire profession. The possibility, as Knief aptly notes, that the public may misunderstand what the auditor's opinion entails might explain most of the criticism raised in the press.[15] It does not, however, explain some of the criticism raised by members of academe and the WP profession itself.[16]

The independence problem originates first in the inherent difficulties in applying the concept of independence to the real world, and second in the lack of more specific guidelines for German auditors covering independence in appearance.

The criticism centers mainly on the laws and regulations covering auditors' conduct, specifically the Corporation Law of 1965 and the

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[13] Ibid., pp. 131-33.

[14] Some of the more recent bankruptcies are those of Herrstatt Bank, SB-Mehrwert, and Stumm; see J. Wintermann, "Renaissance des Testats," *Börsen Zeitung* (4 April 1977): 1 ff.

[15] P. Knief, "Der Wirtschaftsprüfer im Spannungsfeld zwischen gesetzlichem Auftrag und öffentlicher Erwartung," *Betriebswirtschaftliche Forschung und Praxis* (Heft 2, 1976): 114-19. See also pp. 121-22 for a summary of headlines concerning criticism of the WP profession that were published in newspapers and periodicals in the last few years.

[16] For example, the criticism and questions raised by L. Schruff, "Zur Objektivierung des Unabhängigkeitspostulats bei Jahresabschlussprüfungen," *Betriebswirtschaftliche Forschung und Praxis* (Heft 2, 1976), pp. 140-50; J. P. Kicherer, "Kummer mit der Unabhängigkeit," *Der Volkswirt* (Nr. 16, 18 April 1969): 38 ff.; U. Leffson, "Erkenntniswert des Jahresabschlusses und Aussagewert des Bestätigungsvermerks," *Die Wirtschaftsprüfung* (Heft 1/2, 1976): 4-9; W. Huppertz, "Die widersprüchliche Lage des Wirtschaftsprüfers bei der Abschlussprüfung," Blick durch die Wirtschaft — *Das Handelsblatt* (4 November 1976): 4-5.

Professional Law, as well as the role of the WPK in issuing guidelines and regulating the profession.

The Corporation Law of 1965 with its limited casuistry of paragraph 164 is severely criticized by Westrick. He notes[17] that this law does not deal with the following issues:

1. An auditing firm could audit a corporation even if a member of a supervisory board of the auditing firm is at the same time also a member of the managing board of a corporation that has a significant influence on a corporation to be audited.
2. A Wirstschaftsprüfer who is a majority or sole stockholder of a corporation could perform the audit of this corporation providing that the Wirtschaftsprüfer is not considered an enterprise (*Unternehmen*).[18]
3. The casuistry of paragraph 164 leaves open the question of whether an auditing firm may audit a corporation if both have the same majority stockholder.[19]
4. The casuistry does not deal with the problem of economic client dependency (*Kundenabhängigkeit*).[20]

Westrick admits that even if these loopholes were closed, there would still be many questions unanswered. He feels that a catch-all clause (*Generalklausel*) ought to be added to the casuistry.

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[17] P. Westrick, *Abschlussprüfung und Abschlussprüfer nach geltendem und zukünftigem Recht* (Heidelberg: Verlagsgesellschaft "Recht und Wissenschaft" MBH, 1963), pp. 86-87.

[18] This situation is prohibited by the 1977 revision of the WPK's "Richtlinien . . ." effective since January 1, 1979.

[19] Westrick must be referring to those situations in which the federal government has been a majority stockholder of both the WPG and the auditee. Recent court rulings by the German High Court (*Bundesgerichtshof*) have established that the federal government under certain circumstances is considered an enterprise (*Unternehmen*). In such a case, the casuistry of the Corporation Law of 1965 applies which implies that this criticism may no longer be valid. However, court rulings have gone beyond the casuistry. The High Court also determined that less than a 50 percent ownership of one entity by another entity could be considered as "affiliated" enterprises (*verbundence Unternehmen*) if special circumstances suggest a dominating influence of one by the other. See, "Aus der Rechtsprechung," *Die Wirtschaftsprüfung* (Heft 3, 1978): 80-84; and H. P. Müller, "Anmerkungen zum Urteil des BGH vom 13. Oktober 1977 über die aktienrechtliche Unternehmenseigenschaft von Gebietskörperschaften," *Die Wirtschaftsprüfung* (Heft 3, 1978): 61-67; also, "Lufthansa Urteil," *Die Aktiengesellschaft* (Nr. 12, 1975): 330-33.

[20] This may also be a problem that has not been resolved in the United States. However, the SEC approved certain rules in June 1978 which require companies to disclose (1) the percentage of total nonaudit service fees to the total annual audit fees, (2) individual nonaudit services which have fees greater than 3 percent of the annual audit fee, (3) all nonaudit services provided by the independent auditor. See "Accounting Series Release 250," *Securities and Exchange Commission* (Washington, D.C.: Government Printing Office, 29 June 1978).

It should be noted that Westrick made these statements in response to the government draft (*Referentenentwurf*) of the 1965 Corporation Law long before final enactment of the law. However, his objections were not heeded since essentially no changes were made pertaining to this issue in the final form of the law.

Supporters of the current paragraph 164, which include the *Institut der Wirtschaftsprüfer* (IdW), felt that due to the severe consequences of violation of paragraph 164 (the audited financial statements would be declared void in such a case), the casuistry should not be extended since the WP is also bound by the Professional Law which requires the auditor to be independent.[21]

In contrast, the Corporation Law of 1937 did have something resembling a general clause concerning auditors' independence in paragraph 137 which excluded the following from performing an audit:

(a) any member of the board of directors and any employees of the corporation to be audited,
(b) any member of the board of directors and any employees of a corporation that is dependent on or is dominated by the corporation to be audited,
(c) any person whose business management (*Geschäftsführung*) is significantly influenced by any of the individuals mentioned in (a) or (b).[22]

Comparing these requirements, especially (b) and (c) with the casuistry of the Corporation Law of 1965, it is obvious that the new law did not strengthen the independence requirements but did eliminate some of the ambiguity of (b) and the requirement of (c) entirely.[23]

The justification for these changes, endorsed by the professional organization of the WP, was that nullification of the financial statements was too strong a measure to be based on anything less than clear-cut guidelines. Furthermore, proponents of the limited casuistry of paragraph 164 argued that the Professional Law (WPO, paragraph 43 and especially paragraph 49) already includes a general clause to cover other auditor-client relationships. Violation of the Professional Law, in contrast to the Corporation Law, will not result in nullification of the audited financial statement and thus does not expose a WP to liability claims from the audited corporation for invalid financial statements

[21] See WP-Handbook 1977, p. 50.

[22] This is the authors' translation of paragraph 137 of the Corporation Law of 1965 as quoted in H. Karehnke, "Zur Unabhängigkeit des Abschlussprüfers," *Die Aktiengesellschaft* (June 1971): 179.

[23] The Corporation Law of 1965 eliminated some of the ambiguity of the Corporation Law of 1937 by defining "affiliated enterprises" (*verbundene Unternehmen*) and uses this term in the casuistry of paragraph 164 of the 1965 law.

but may result in a professional court proceeding.[24] Apparently, this is considered a less severe consequence by the profession's institutions. Considering that the punishment may be more than mere censure (in its severest form, expulsion from the WP profession), it seems that the consequences for disregarding the tenets of the WPO would still be quite sufficient to act as an effective deterrent.

Karehnke feels that paragraph 164 of the Corporation Law of 1965 in conjunction with paragraph 49 of the WPO provides the WP with sufficient guidance.[25] Others have serious doubts as to the proper interpretation of either regulation.[26]

Some have argued that paragraph 164 of the Corporation Law of 1965 covers the "more serious" cases of impairment of independence in appearance whereas paragraph 49 of the WPO deals with the less serious cases of impairment. However, Schmaltz et al. note that this is not a correct interpretation of the law. Other auditor-client relationships, such as close family ties between an auditor and his or her client, may impair independence in appearance but are more difficult for a third party to recognize. Their threat to independence can only be determined, they assert, by considering the special circumstances surrounding each case.[27]

Schmaltz et al. consider the casuistry of paragraph 164 of the Corporation Law of 1965 to be special cases concerning independence in appearance that are covered simultaneously by paragraph 49 of the WPO which mandates auditors' independence in appearance. However, they believe that paragraph 164 of the Corporation Law of 1965 exhausts all types of auditor-client relationships that impair independence in appearance.[28] This somewhat surprising conclusion can only be understood if it was intended to refer to the fact that there are no other auditor-client relationships that lead to nullification of the audited financial statements even if lack of independence can be proven.[29]

[24] H. P. Kicherer, *Grundsätze ordnungsmässiger Abschlussprüfung* (Berlin: Duncker-Humblot, 1970), p. 106.
[25] Karehnke, "Zur Unabhängigkeit," p. 179.
[26] H. P. Kicherer, "Zur Unabhängigkeit des Abschlussprüfers," *Die Aktiengesellschaft* (February 1972): 37-40.
[27] Adler/Düring/Schmaltz: *Rechnungslegung und Prüfung der Aktiengesellschaft,* 3rd ed., Band 2, bearbeitet von: Schmaltz, K.; Forster, K. H.; Goerdeler, R.; Havermann, H. (Stuttgart: C. E. Poeschel Verlag, 1971), p. 224.
[28] Ibid., p. 225.
[29] G. Wüstemann, *Probleme der Glaubwürdigkeit von Abschlussprüfern: Wirtschaftsprüfer und Certified Public Accountant* (Frankfurt: Verlag Harri Deutsch, 1975), p. 59.

The WPK voiced its position when discussing Schruff's study[30] which dealt to a significant degree with ownership identities of *Wirtschaftsprüfungsgesellschaften* (WPGs) and their clients. In this study, Schruff disclosed a number of actual cases in which auditing firms (mostly those organized as *Aktiengesellschaften*) and their clients were owned to various degrees by the same entity.

It seems logical to question whether such relationships impair independence in appearance. However, the WPK concluded that the relationships disclosed by Schruff do not exceed the limits of the casuistry in paragraph 164 of the Corporation Law of 1965. With this interpretation, the WPK agreed with Schmaltz et al., that paragraph 164 is a *lex specialis* which prohibits simultaneous application of paragraph 49 of the WPO which is considered a *lex generalis* by implication.[31]

Realizing that a legal definition of the relationship between paragraph 49 of the WPO, a professional law, and paragraph 164 of the Corporation Law of 1965 has not been established, the WPK indicated that it will follow closely any developments in court cases and commentaries of professional and corporate law rulings which concern the auditor and his selection process.[32]

The Professional Law is also criticized for being less effective than is sometimes claimed by various proponents of the status quo because this law, especially paragraphs 43 and 49, is left to the interpretation of each WP and/or auditing firm. Kicherer states that there is no competent and neutral authority which could decide in a particular case when an auditor is not independent. He believes that the regular courts are neutral but lack competency and that the Institut der Wirtschaftsprüfer and the Wirtschaftsprüferkammer are competent but cannot be considered neutral since they are dominated by the WPs themselves.[33] Thus, the problem lies in the unsatisfactory interpretation of paragraph 49 of the WPO.[34]

It could be concluded that at the heart of the independence problem is the fact that the individual WPs or auditing firms are left to their own interpretations of what constitutes a relationship in which the auditor is considered to be independent in appearance. However, it

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[30] L. Schruff, *Der Wirtschaftsprüfer und seine Pflichtprüfungsmandate* (Düsseldorf: IdW Verlag GmbH, 1973).

[31] If both *lex specialis* and *lex generalis* cover the same situation, *lex specialis* takes precedence over *lex generalis*. See Leffson, "Erkenntniswert des Jahresabschlusses," pp. 7-8.

[32] Mitteilungsblatt der Wirtschaftsprüferkammer Nr. 76 (Wirtschaftsprüferkammer, 2 April 1976), p. 9.

[33] Kicherer, "Kummer mit der Unabhängigkeit," pp. 38-39.

[34] Kicherer, "Zur Unabhängigkeit des Abschlussprüfers," p. 38.

could be argued that the WPK's directives are guidelines to help the auditor in this dilemma. Wüstemann comments, though, that the WPK assumes that the auditor is able to recognize when his independence in appearance is impaired. This is reflected in the way the directives are worded. They do not contain any mandatory edicts (*Musserwartungen*), and can be deviated from.[35]

Solutions Suggested in the German Accounting Literature

The German accounting literature contains many suggestions for strengthening the independence of auditors. Even though it is apparent to most critics that it will be impossible to solve all of the problems concerning auditor's independence, it is felt by many that certain changes would result in greater credibility of the auditor's work and of the WP profession.

The major recommendations will be discussed by dichotomizing them into proposals involving structural changes of the WP profession and those that could be implemented within the current structure. This dichotomy is employed only to facilitate the discussion. It is not intended for any other purpose.

Proposals involving structural changes of the WP profession. It has often been suggested that an SEC-type federal government agency (*Aktienamt*) should be established.[36] It is argued that an Aktienamt in charge of ensuring auditors' independence is the best way to deal with the independence problem.[37] However, views differ as to the degree of responsibility and power the proposed government agency should be granted.

At one end of the spectrum, the moderate view would like to see this government agency function as the Securities and Exchange Commission in the United States. At the other end of the spectrum, the extreme position calls for a government agency to assume the audit function entirely and have government employees perform all mandatory audits. In the middle are proponents of an SEC-type government

[35] Wüstemann, *Probleme,* p. 62. This criticism is somewhat lessened by the WPK's directives issued in December 1977. In this revision, the WPK does use mandatory edicts regarding two types of auditor-client relationships, namely, direct stockownership by a WP in his audit client and maintenance of the audit client's books and records.

[36] An *Aktienamt* is a federal government agency whose responsibility would include the supervision and control of activities relating to stock corporations, similar to the function of the SEC in the United States.

[37] See M. Richter, *Die Sicherung der aktienrechtlichen Publizität durch ein Aktienamt* (Köln: Carl Heymanns Verlag KG, 1975).

agency which would have the additional responsibility of assigning auditors to audits and/or paying the audit fees directly to each auditor.

Opponents of the idea of government intervention, no matter what the degree, do not believe that this would solve all the independence problems, nor do they believe that such a drastic step is warranted. Schulze-Osterloh is convinced that a government agency would significantly change the structure of the accounting profession.[38] Leffson, usually quite critical of the present status of the WP profession, also thinks that such an agency is unnecessary. He states that the WPO has given the profession the right and the privilege to govern and control itself. As long as the profession conducts these duties conscientiously, there is no need to have an agency as an additional governmental watchdog. However, if the profession does not do so, the creation of such a government agency will become unavoidable. It is the responsibility of the WP profession, he asserts, to counteract the widespread suspicion that the profession's self-regulating effort has not been vigorous enough.[39]

Westrick also thinks that such a drastic measure is unwarranted since the reasons for the current credibility gap in the public's mind have their roots in the Corporation Law itself which lacks provisions to secure auditors' independence in many situations. He asserts that having the federal government assume the audit function is a harsh verdict of distrust against the WP profession and could not possibly be pronounced any stronger.[40]

Another proposal to strengthen the credibility of the auditing profession is to discontinue the practice of having non-WPs hold a financial interest in auditing firms and to disallow ownership of one auditing firm by another auditing firm.[41] Germany seems to be unique among the Common Market countries in permitting persons or entities outside the accounting profession to hold a majority interest in auditing firms. This practice casts a shadow on the entire profession's integrity and independence. Considering that Schruff's research which disclosed the relationships between stockholders of WPGs and stockholders of their clients was published in 1973, it seems difficult to understand that such

[38] J. Schulze-Osterloh, "Referat: Stellung und Unabhängigkeit des Wirtschaftsprüfers," in *Wirtschaftsprüfung Heute,* ed. W. Busse von Colbe and M. Lutter, p. 112.

[39] U. Leffson, in "Meinungsspiegel," *Betriebswirtschaftliche Forschung und Praxis* (Heft 2, 1976), p. 219.

[40] Westrick, *Abschlussprüfung,* p. 83.

[41] See Leffson, "Erkenntniswert," pp. 4-9.

situations still exist today. The argument that these relationships are not considered improper according to the Corporation Law of 1965 and thus do not impair independence in appearance is unconvincing.

Most of the larger WPGs that have outside stockholders are partially or fully owned by commercial banks and/or the government. Although the audit function was initially performed by banks which founded the first auditing firms to assure themselves of the financial position of certain business entities, the rationalization that the practice has a historical basis is too simplistic.[42]

Wüstemann questions the motives of any outside entity that invests in a WPG since the profit motive is not permitted to be a primary goal of a WPG. It may be that these investors want to assure themselves that the WPG remains independent and impartial which implies that this cannot be achieved with ownership by others. Unfortunately, ownership by outside entities causes others to doubt the auditors' independence. Another reason for ownership in a WPG may be to control the WPG, an effort that *de lege lata* is prohibited.[43]

Proposals not involving structural changes of the WP profession. The practice of the auditee electing the auditor has long been regarded as an anomaly. Schmalenbach wrote in 1949 that having a corporation elect its own auditors is an absurdity since it is not common practice in life to leave the selection of the examiner to the person who needs to be judged independently.[44]

Those who do not advocate a government agency selecting the auditor propose, as an alternative, to increase the period of auditor election to more than one year. Some believe that election for a period of three to six years would give management less power over the auditor.[45] Even though German corporations rarely change their auditors, election for several years at a time is still considered desirable. Richter believes that the practice of infrequent auditor change is not as effective

[42] Wüstemann, *Probleme,* pp. 109-10.

[43] Ibid.

[44] See W. W. Dürrhammer, *Unabhängigkeit des Abschlussprüfers im Aktiengesetz und in der Praxis* (Düsseldorf: Handelsblatt GmbH, 1971), p. 38.

[45] M. Richter, "Die Stellung des Abschlussprüfers im Entscheidungs und Kontrollprozess der Aktiengesellschaft," *Diskussionsbeiträge — Fachbereich Wirtschaftswissenschaft, Universität des Saarlandes* (September 1977); also the proposed 5th Directive of the EEC recommends that the auditor be elected for at least three years but not more than six years at a time. See H. Kaminski, "Überblick über die im Jahre 1972 von den Gremium der Europäischen Gemeinschaften veröffentlichten Richtlinien und Stellungnahmen," *Journal UEC* (April 1973): 82-88.

in encouraging the auditor to present a clear presentation of his audit findings as is auditor election for a multiyear period.[46]

It should be recalled that for mandatory audits, the auditor is elected by the stockholders at the annual stockholders' meeting. However, this election process is considered to be a preprogrammed ritual. There are no known cases in which stockholders rejected the proposed auditors except when there was an interim change in the majority stockholder identity.[47]

Broadening auditors' liability. Under present German law, a WP is generally liable to a third party only if this third party, for instance a stockholder, relied on incorrect financial statements and suffered a financial loss from any decision made, and if the auditor performed his duties in such a way as to purposely misrepresent given facts.[48] Various authors have suggested broadening the liability which makes an auditor vulnerable to litigation if he was negligent (*fahrlässig*) in performing his duties.[49] Others want to increase the present limited liability of DM 500,000 per case to unlimited liability.[50]

Westrick considers a broadened third party liability to be a powerful tool for ensuring independence.[51] However, others question the effectiveness of such a change in liability. Schulze-Osterloh believes that facilitating third party suits by making an auditor liable for ordinary negligence will have little effect since the third party would have to know the details and circumstances which led to the supposedly incorrect audit decision. Without this knowledge, the plaintiff cannot make any pertinent accusations.[52] He also states that a proper judicial judgment can only be reached if the WP is not bound by the standard of secrecy. Schulze-Osterloh feels it is doubtful that the WP would be permitted to speak freely under present regulations even if it were to defend himself.[53]

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[46] Richter, "Die Stellung des Abschlussprüfers," p. 25.

[47] Ibid., p. 6.

[48] See Westrick, *Abschlussprüfung,* pp. 89-90, and H. W. Czech, "Die Haftung des Wirtschaftsprüfers gegenüber Dritten," *Betriebs-Berater* (10 June 1975), pp. 723-26.

[49] For example, Westrick, *Abschlussprüfung,* p. 106, and Kicherer, "Kummer mit der Unabhängigkeit," p. 42, and Richter, *Die Sicherung der aktienrechtlichen Publizität,* pp. 186-88, favor a broadened liability to third parties.

[50] For example, V. Emmerich, "Die Kontrolle der Kontrolleure," in *Wirtschaftsprüfung Heute,* ed. Busse von Colbe and Lutter, p. 226, believes that the present liability could be significantly increased, even though not unlimited, to make it still insurable.

[51] Westrick, "Abschlussprüfung," pp. 103-4.

[52] Schulze-Osterloh, "Referat," pp. 109-10.

[53] Ibid., p. 109.

Others are opposed to extending third party liability because it may invite unjustified lawsuits which would restrict use of the profession's resources. They point to the increase in liability suits in the United States, claiming that it did not solve the U.S. profession's problems.[54] However, a study by Bedingfield determined that as a result of the increased lawsuits involving auditors, changes, such as better supervision and training of audit personnel, an increase in the audit intensity, and more selectiveness when deciding whether to accept an audit engagement have been made by U.S. accounting firms.[55]

INCOMPATIBLE ACTIVITIES

It has been estimated that approximately 30 percent of the WP profession's revenue is derived from management consulting. Even though the WPO explicitly lists consulting as an activity compatible with the profession, the widespread practice has come under criticism as being a detriment to the profession's credibility.[56]

Some consider almost all consulting to be incongruous with the auditor's functions, while others are more concerned with the consulting work undertaken for clients who are at the time also audit clients.

A recent empirical study by Richter revealed that more than 70 percent of business journalists surveyed considered management consulting by WPs for their clients to impair the auditor's independence because

1. WPs audit their own decisions and recommendations;
2. WPs are personally interested in the audit results, especially if their consulting was deficient;
3. WPs cannot impartially guard the interests of financial statement users and their own clients at the same time;
4. During the consulting work, close relationships between management and auditors develop; and
5. Economic dependency of the auditor is strengthened due to increased revenues from a given client.[57]

However, approximately 65 percent of the WPs questioned did not con-

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[54] H. Havermann, "Meinungsspiegel," *Betriebswirtschaftliche Forschung und Praxis* (Heft 2, 1976), pp. 213-16.

[55] J. Bedingsfield, "Effect on Recent Litigation on Audit Practice," *Journal of Accountancy* (May 1974): 55-62.

[56] The SEC in its Accounting Series Release (ASR) 250, did not directly prohibit management advisory services, but it nonetheless requires certain disclosures as described in footnote 20.

[57] See, "Reaktion mit Emotion," *Wirtschaftswoche* (Nr. 29, 1976), pp. 42-43.

sider management consulting to infringe upon their independence status since

1. Their professional code requires them to decline engagements which impair their independence;
2. They refuse certain engagements out of self-interest; and
3. The information gained from consulting more than offsets any possible impairment of independence.

It should be noted that this study was criticized by the WPK on the grounds that business journalists are not a good surrogate for users of audited financial statements.[58]

EXTENSION OF THE CASUISTRY AND RELATED SUGGESTIONS

As noted earlier, the individual WP (and WPG) has relatively few specific and detailed guidelines to consult in deciding what constitutes an auditor-client relationship that infringes on auditors' independence in appearance. Wüstemann puts the independence problem in proper perspective when he notes that the auditing function is performed by different individuals who must comply with the same measurements and requirements. Therefore, it would be in the spirit of the mandate for auditors' independence to establish a list of auditor-client relationships which impair the auditor's independence in appearance. He concedes that such a list could subjectively be considered by the parties involved as unjust, but he believes that it would facilitate the independence problem, contribute to uniform handling, and provide legal certainty.

Wüstemann states that for reasons of practicability, it is impossible to accommodate each and every concerned party. The profession, nonetheless, should consider auditor-client relationships in which the auditing profession itself suspects impairment of independence or in which lack of independence in appearance is shown. Wüstemann states that to construct such a list, high standards must be used to ensure the auditor's impartiality and credibility.[59]

Schruff states that whether independence in appearance is impaired in an auditor-client relationship depends upon the subjective evaluation of the relationship by the financial statement users. Therefore, the refutation of this charge can only be based on conventions which have

[58] See M. Thümmel, "Dr. Richters Fragebogen," Leserbriefe, *Handelsblatt* (26 June 1976), p. 9, and M. Richter, "Ergebnisbericht über die schriftliche Befragung zur Unabhängigkeit des Wirtschaftsprüfers," Unpublished Summary (16 June 1976), pp. 3-5.

[59] Wüstemann, *Probleme,* pp. 62-63.

established the situations that represent a lack of independence in appearance. Such conventions have not been constructed. They must be established and need the consensus of all persons concerned.

What must be done is to set minimum and maximum limits. The minimum limits should be determined with the help of the materiality principle which is applicable to any type of information dissemination. Any auditor-client relationship that falls under this minimum limit is considered immaterial and consequently would not affect auditors' independence.[60]

Under Schruff's proposal, an auditor would be guided by definite and specific rules. If he encountered a situation that was above the maximum limit, he would decline the audit engagement. However, if the relationship fell below the minimum limit, the auditor would be considered independent and could accept the engagement, *ceteris paribus*. If he found himself in a situation that fell between the two limits, he would be permitted to accept the audit engagement, but he would be required to disclose the relationship so that each individual user of the resulting audited financial statements could form his own opinion of the auditors' independence.[61]

Schruff feels that these conventions should be established by court rulings.[62] It seems that determining the minimum and maximum limits is in essence an empirical question since it deals solely with the concept of independence in appearance.

The premise of Schruff's suggestion is his belief that without these minimum and maximum limits, it would be necessary to disclose a large variety of auditor-client relationships that may impair independence in appearance. The limits, therefore, would be used to classify sensitive auditor-client relationships into those that do not impair auditors' independence and those that do.

SUMMARY AND CONCLUSIONS

This paper has provided an overview of the current thinking in the German accounting literature concerning auditors' independence. It may come as some consolation to U.S. auditors to learn that the German accounting profession is also wrestling with the independence issue. Some of the criticism raised in Germany could apply to the U.S. auditing profession as could some of the suggested solutions. It seems that

[60] Schruff, "Zur Objektivierung," pp. 145-50.
[61] Ibid., p. 150. An example of such a situation is the recently enacted disclosure requirement by the SEC as mandated by ASR 250.
[62] Schruff, "Zur Objektivierung," p. 149.

the SEC's position, expressed in ASR 250, concerning management advisory services performed by auditors, is a step toward disclosure of certain auditor-client relationships and, using Schruff's framework, falls between the minimum and maximum limits.

The German professional organizations have not been unaffected by the criticism raised in the literature and the financial press. The WPK more often than not has found itself defending the status quo, claiming that present rules and regulations are sufficient and implying that many of the changes suggested are unwarranted. However, repeated criticism in the literature and the financial press of the status quo, as well as the desire of the profession to conform to a higher degree with other countries' independence standards, especially U.S. standards, seems to have weakened the WPK's resistance to change.

The latest WPK directives issued in December 1977 constitute the WPK's first step in specifically prohibiting certain auditor-client relationships. Auditors will not be considered independent in situations in which they own any shares of their audit clients. This is a significant departure from the WPK directives of July 1974, which suggested that independence in appearance *may* be impaired when an auditor has a financial interest in his client.[63] This change in wording is also a departure from the WPK's apparent premise that WPs are able to determine for themselves when their independence in appearance is impaired.

There is little doubt that there is a need for more specific guidelines covering independence in appearance. Since the concept of independence in appearance is concerned with the collective perceptions of users of financial statements, including auditors, it seems that any specific rules covering auditors' independence in appearance should be based on such perceptions. Determining what those perceptions are should be the first step toward a solution of the independence problem in Germany.

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[63] Wirtschaftsprüferkammer, *Richtlinien für die Berufsausübung der Wirtschaftsprüfer und vereidigten Buchprüfer* (July 1974).

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," Accountancy (March 1972): 4-8.

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Journal of the Midwest Economics Association

Vol. 21 | Summer 1981 | No. 2

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